Clinical Lecture
ON
CONJUGATE DEVIATION OF THE HEAD AND EYES,
AS A SYMPTOM IN CEREBRAL HÆMORRHAGE AND OTHER AFFECTIONS,

Delivered at St. Mary's Hospital, Oct. 21st, 1879,

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(*Reported by* Mr. F. H. BUTLER, B.A.)

IT is very rarely that one makes a single symptom the subject of a clinical lecture; but although, in my systematic lectures, I always describe and explain the deviation of the head and eyes that we see in many cases of hemiplegia, and occasionally in other affections, there is not sufficient time for its thorough elucidation. I have therefore taken the opportunity afforded by two cases in which this deviation has been observed to bring the subject before you. It is a symptom which has occupied very little attention in England, but which has been the subject of frequent discussion in France, and to some extent in Germany. Vulpian, Lépine, Prevost, and, more recently, Landouzy and Grasset, have written about it, and one of the most interesting monographs I have ever met with on any subject is that by Dr. Prevost,[1] of Geneva, which I hold in my hand. The two cases under observation by which this lecture was suggested are as follows: in one of them the symptom was an effect of paralysis, in the other a phenomenon of spasm. The first is that of a man aged fifty-one, who was admitted on Sept. 16th, suffering from choleraic diarrhœa of unusual severity. He was recovering from this when, on the 20th, he fell from his chair in a semi-conscious condition, with absolute paralysis of the right limbs, while the face was turned over the left shoulder and the eyes looked as far as possible to the left. On recovering consciousness the patient was found to be speechless; six days later the deviation of the head and eyes to the left was still marked, but diminishing, and it soon passed off. The patient still remains hemiplegic and aphasic.

The other case is also one of aphasia, but there is no hemiplegia. From time to time, however, the patient has transient loss of power in the right arm, but he also has unilateral convulsion of the right limbs, during which the head and eyes are turned to the right—towards the affected side this time, you will see, not away from it, as in the previous case.

The description of this conjugate deviation of the eyes and head as a symptom is very simple. We will consider it first as associated with the common form of hemiplegia. The head is turned towards or over one shoulder, towards which also the eyes are fixedly directed. If you ask the patient to look in the other direction, he may be quite incapable of even the slightest movement away from the abnormal position; sometimes he can get as far as the middle line, or nearly so, with the head and eyes, but not further; and if you place his head straight, the moment it is free it returns into the old position. The two eyes are perfectly parallel; there is no squint, except occasionally towards the end of the phenomenon.

In hemiplegia the direction of the head and eyes is always away from the paralysed side. "The patient is always," as it has been humorously expressed, "looking for his lesion." It is in severe cases of hemiplegia that it most frequently occurs, but how often it is to be met with, and how often it is absent, I have no means of knowing. The cases in which it does occur are those in which the hemiplegia comes on suddenly; scarcely ever when the onset is gradual or slow. Sometimes this lateral deviation enables us to diagnose a cerebral attack — for instance, occasionally a patient is brought to the hospital unconscious, with all his limbs flaccid, and this symptom being present may tell us that there has been cerebral hæmorrhage, before we find it out from any other effect. As I shall show you, the symptom has no very definite relation with the position of the lesion. It is not a localising symptom. The only association is with the suddenness of the attack, and with the severity of the hemiplegia. Still it does not imply any specially bad prognosis, but simply that the attack has been severe at the moment. A very curious fact about it is that it does not persist. In the patient who first called my attention to it here, whom I saw two or three days after his attack, the lateral deviation was diminished, and two or three days later it disappeared; and it is the rule that the deviation is not permanent, but in four days or a week it is completely gone. Whilst it is passing off, a slight squint may be observed—i. e., the two eyes are not altogether parallel in certain positions, but this is by no means usual. Generally the rotation of the head improves first, and later the turn of the eyes. It is precisely this fugitive character of the symptom which requires explanation. The disappearance of the rotation of the head and deviation of the eyes is not part of a general improvement, or an indication of commencing recovery; it takes place, and the movements of the head and eyes resume their natural character, when the hemiplegia is, and remains, as decided as ever. This remarkable symptom, while it was noted from time to time, obtained no attention whatever till quite recently. As far as I recollect, the first time it was commented on in this country was at the death of Professor Whewell, of Cambridge, in 1866, in consequence of a fall from his horse, and it is mainly since then that it has engaged attention anywhere, although previously, as now, it must have been exceedingly common. But, as you all know, in medicine, as in other things, we see only what we are prepared to look for.

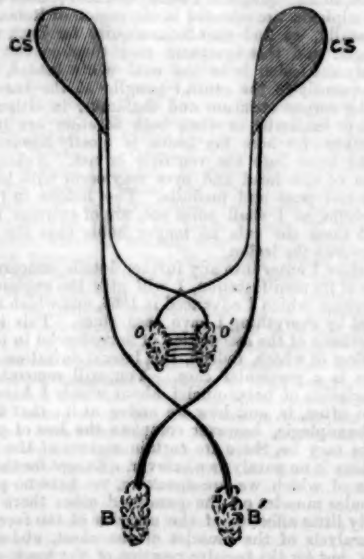
So much, then, for the symptom in itself. Now about the lesion with which it is associated. Most commonly, according to my own experience, this is cerebral hæmorrhage, but it is by no means pathognomonic of hæmorrhage; the symptom occurs also with embolism and embolic softening, the only condition being that the attack of hemiplegia shall be sudden. So, again, with respect to the seat of the lesion; except that it will be found on the side of the brain towards which the face and eyes are turned, it tells us nothing. The lesion may be in the cortex of the hemisphere, and at any part of the cerebral surface, provided it gives rise to hemiplegia. Usually cortical lesions attended with hemiplegia are situated in the region of Rolando, but, exceptionally, we find that lesions quite far back occasion hemiplegia, and this symptom may then coexist. More commonly the lesion is in the oval white centre, but still more frequently in the central ganglia at the base of the brain, the corpus striatum and thalamus, in either corpus striatum or thalamus, or when both together are involved, and whether—for here the lesion is mostly hæmorrhage—the blood burst into the ventricle or not. Again, lateral deviation of the head and eyes may occur with lesions in the crus and pons and medulla. The lesions in the pons and medulla, as I shall point out, are of extreme interest, and with them the rule no longer holds that the patient looks towards the lesion.

But before I enter into any further details concerning the varieties of its manifestation, I will give the explanation of its occurrence which I advanced in 1866, and which has been confirmed by everything I have seen since. This turns on the hypothesis of the association of nerve-nuclei in the cord, of the effect of which, indeed, this lateral deviation of head and eyes is a particular case. You will remember what this association of nerve-nuclei, about which I have had to speak so often, is, and how we arrive at it; that in every case of hemiplegia, however complete the loss of power in the limbs may be, there are certain regions of the body in which there is no paralysis whatever. Except for the lateral deviation of which we are speaking, we have no paralysis of the ocular muscles on the paralysed side; there is comparatively little affection of the muscles of the face; there is no paralysis of the muscles of the chest, abdomen, or back; or, but for the fugitive rotation of the head, of those of the neck. This remarkable immunity of certain muscles all down the paralysed side has exercised physiologists a good deal, and it was considered by some sufficient to establish as a principle that the opposite hemisphere and corpus striatum were the motor centres only for the limbs,

[1] De la Déviation Conjuguée des Yeux et de la Rotation de la Tête dans certains cas d'Hémiplégie, par Dr. J. L. Prevost (de Genève). Paris, 1868.

and had nothing to do with the movements of the face and body; but this explanation would create more difficulties than it removed, and it is certainly not the true one. Now if you notice the difference between the paralysed and the non-paralysed parts in hemiplegia, you will find that those parts are paralysed which are perfectly independent of corresponding parts on the other side, while those escape which always or at least habitually act together with the corresponding (or other) muscles on the opposite side, and cannot be thrown into action independently of them. You all know that you can move the left hand without moving the right, and so with the left leg; but you cannot move the left eye and not the right eye, or the left side of the chest or abdomen alone, and you cannot throw into action the muscles of one side only of the trunk anywhere. Now this gives the clue to the immunity from paralysis of which we have spoken. Where the muscles on the two sides of the body are quite incapable of being moved independently of each other there must be some nervous mechanism which associates their nerve-nuclei in the spinal cord. For instance, the nerve-nuclei for the muscles of the two halves of the trunk, instead of being perfectly independent and distinct, as are the nuclei for the two arms or legs, are connected by transverse bands, so that to all intents and purposes two nuclei are fused together, and we have a common nerve-nucleus for the two sides connected with both corpora striata. If, then, one corpus striatum is damaged, you still have the other, which transmits orders down to this nucleus common to both sides of the body. The corollary of this, which was foreseen in theory, turned out to be exactly true in fact. The same common nerve-nucleus which preserves muscles from hemiplegia makes unilateral chorea or convulsions of any kind bilateral in exactly the same parts. Supposing you have unilateral chorea, and supposing the right arm and leg to be perfectly quiet and the left in continual jactitations, you will find that the chorea will cross the median line, and affect muscles on the other side exactly at the points where the muscles are spared in hemiplegia, it will affect the eyes, and both will be jerked to and fro; in the face, though there is predominant motion on one side, there is chorea on both sides. The abdominal muscles and diaphragm are equally affected on both sides. We thus see that association of nerve-nuclei in the spinal cord is shown both by paralytic and convulsive phenomena.

It may, perhaps, be better understood by means of the accompanying diagram:—C S and C S′ represent the two



corpora striata; O and O′ the motores oculorum nuclei, closely associated by transverse fibres, so as almost to form one nucleus; B and B′ the nuclei of the brachial plexuses, which are perfectly independent. If C S is injured, B is paralysed, and since there are no fibres connecting B with B′ through which it can receive assistance from C S′, the arm will be paralysed; while O, though equally with B deprived of impulses from the damaged C S, being, so to speak, fused with O′, will be in communication with C S′, and its muscles will not be paralysed. On the other hand, if C S is discharging choreic or convulsive impulses, they will reach only B and not B′, so that the movements will be strictly unilateral, but they will affect O′ as much as O, and the movement will be bilateral.

The symptom we are considering, then, arises from this bilateral association of nerve-nuclei. If we suppose for a moment the two eyes to be one, the lateral movements of which to the right and left are effected by the two external recti, there will appear to be nothing extraordinary that, say in left hemiplegia, the left external rectus should be paralysed, and that, like the face, the eye should be carried to the right by the unbalanced action of the muscle of the sound side. This is, to all intents and purposes, what occurs, but we have to explain the conjugation of the two eyes. Again, in the rotation of the head, if we leave out of sight all the rotatory muscles except the inferior oblique (axo-atloid), the paralysis of the left will permit the head to be turned to the right. But here we have the sterno-mastoid and trapezius of one side co-operating with the inferior oblique of the other, and we have to explain the anomaly of these muscles on the hemiplegic side not merely being exempt from paralysis, but contributing to the rotation. We have, moreover, to account for the fugitive character of both rotation and deviation. The explanation turns, as I have said, on the association of the nerve-nuclei. And here is an interesting point in these two cases: both in the rotation of the head and in the lateral movements of the eyes the association between the nerve-nuclei concerned is not simply transverse, it is oblique.

Let us take, first, the lateral movement of the eyes. We are now concerned not with the up and down movements. We have engaged for the lateral movements the external rectus of the one eye and the internal rectus of the other associated together, and it is the external rectus which takes the lead in looking towards its own side. This must be the case, because frequently, as you know, when we are looking to one side the nose comes in between the eye of the other side and the object, and as the object is thus invisible to the latter, it can only follow its fellow. Now, the external rectus is supplied by the sixth nerve, the nucleus of which is ever so far down the pons—in fact, it is so blended with the facial nucleus, that the two nuclei are almost confounded together. The nucleus of the third, on the other hand, is at the very top of the pons, and yet, as we cannot by any possibility call the external rectus of one side into action without the internal rectus of the other, one sixth nerve and the opposite third must always be associated for this co-operation. But you see the association is oblique, and the fibres which connect the nucleus of the sixth nerve of one side with the nucleus of the third of the other, instead of going straight across the cord, have a considerable length to run. When, therefore, in consequence of some lesion in one corpus striatum or hemisphere, the sixth nucleus can no longer obtain its orders, the impulse from the other corpus striatum, which ultimately reaches it through the associated third, instead of simply passing across the cord, is compelled to travel a considerable distance downwards, and the time required for the education of the nerve-fibres in the transmission of impulses in the direction the reverse to the ordinary one, is the time during which this temporary lateral deviation of the eyes exists.

It is precisely the same thing in regard to the movements of the neck. You have rotation of the head, say to the right; there is a co-operation of the right inferior oblique, which is dragging round the transverse process of the atlas, and the left sterno-mastoid, by far the more important of the two being the inferior oblique. Now the nerve-supply of these muscles is an exact parallel to that of the third and sixth in the upper part of the medulla. The nervous supply of the sterno-mastoid is the spinal division of the spinal accessory, which arises from the whole length of the cervical portion of the cord, while the inferior oblique is supplied by the first cervical nerve, the nucleus of which is at the top of the cord; so that here again the association of nerve-nuclei postulated by the association of the two muscles is long and oblique. This explains, perhaps, why we should have this peculiar origin of the spinal accessory nerve. It is during the time that the oblique communication is coming into operation

after damage to the corpus striatum or hemisphere that we have the lateral deviation.

There have been many other explanations of the lateral deviation of the head and eyes, and till quite lately French observers have considered it as a phenomenon of irritation, a sort of spasm.[1] Dr. Grasset, of Montpellier, is the first, so far as I know, who has recognised the paralytic character of the deviation as seen in hemiplegia, and the contrast it presents when it occurs as a result of spasm or convulsion. In hemiplegia the deviation is not spasmodic in any sense whatever. The rotation of the head has been attributed to the contraction of the sterno-mastoid of the paralysed side; but, as a rule, the sterno-mastoid is comparatively flaccid; when the patient is lying undisturbed only occasionally is it slightly rigid. When the head is forcibly rotated in the opposite direction the muscle starts up, but even then fitfully. It is certainly no rigidity of the sterno-mastoid which throws the head into the abnormal direction; it is an absence of antagonism; and the proof that it is not a phenomenon of spasm is furnished by the exact converse which you see where we have really a spasmodic exhibition of this conjugate deviation of the head and eyes. Now in almost every case of epilepsy we have the lateral deviation as a phenomenon of spasm; but in the general storm of epilepsy one would never quite appreciate its character. As you are aware, very frequently in an ordinary epileptic attack there is unilateral convulsion, first on one side, then on the other. The right side, say, will be convulsed, and now the head is turned over the right shoulder, and the eyes are forcibly carried to the right. After a time the convulsions slacken; the head and eyes then go to the other side and the limbs of that side begin to jerk. Here the head and eyes are turned, not away from the affected limbs, but towards their side of the body. But the most instructive examples of spasmodic deviation are where we have hemiplegia from some lesion of the cortex of the brain, and occasionally attacks of convulsions in the hemiplegic limbs—a not uncommon occurrence. The paralysed limbs only are thrown into convulsions, and during the convulsions there is lateral deviation; but this time *towards* the paralysed limbs and *away* from the lesion, showing at once the distinction between the phenomena of spasm and paralysis. The patient who comes here with aphasia has not paralysis of the right limbs, as a rule; occasionally the right arm is paralysed for a time, but more commonly the right arm and body are convulsed, and then there is deviation towards the affected side and away from the side of the lesion.

One of the most striking illustrations and confirmations of the whole of the explanation you have received of the symptoms under consideration is afforded by experiments and the lucid explanation of them to be found in this pamphlet by Prevost, published in 1868. It is a confirmation not merely as regards this particular phenomenon, but as regards the whole hypothesis of the association of nerve-nuclei. The dog—I select a single animal—does not enjoy the same independence in respect of the limbs as man does. There is very much the same association between the fore-leg of the one side and the hind-leg of the opposite side in the dog, as there is between the sterno-mastoid and the inferior oblique axo-atloid in man. A dog, as we know, when walking or trotting, moves the right fore-leg and left hind-leg together. There is an impulse to alternate conjugate play of the limbs, behind which is just the same sort of association of the nerve-nuclei as we have spoken of in reference to the eyes and neck. This makes interesting the experiments on the brain of a dog, which show that if the corpus striatum or hemisphere of the animal be damaged to a degree which would give man perfect hemiplegia, although there may be weakness of the muscles of the opposite side, there is never complete hemiplegia. But what happens is that the dog, whenever he tries to advance, begins to go round after his tail. This *mouvement de manége* is the equivalent of hemiplegia in man, and, it is interesting to observe, is always associated with conjugate deviation of the head and eyes. Supposing the right hemisphere of a dog to be damaged to a considerable extent, the partial hemiplegia, as you would expect, is on the left side, and if you press the animal it goes down upon that side. But the hemiplegia is very imperfect, and, instead of paralysis, what we see is this: when standing at rest he carries his body towards the right, his eyes are directed to the right, and his head also is rotated to the right, which, if you imagine yourselves in the position of the dog, you can see will bring the ear and eye of the left or paralysed side nearer to the ground; the dog thus stands curved towards the right and looking towards his lesion, and if he moves, round he goes in this circus motion after his tail; he cannot walk straight for the life of him.

The *mouvement de manége*, thus associated in this striking and suggestive manner with conjugate deviation of the head and eyes and neck, is simply an extension of the same effect, and a result of a similar mechanism, the association of the nerve-nuclei of the fore and hind limbs. Supposing the dog is very badly injured, or that in the course of running he falls down, he drops upon his left side, and he will roll over to the left. You have here a key to what must be to medical students and to anybody attempting to follow the results of experiments with the lower animals, confusing accounts of the effects of injury to the brain, when at one moment circus movement from left to right and the next a rolling over from right to left are described as a result of a similar lesion. The circus and revolving movements are not distinct things; one is only the exaggeration of the other.

We come now to another very interesting fact. I have told you that this deviation of the head and eyes is almost always a temporary thing; but if you get a certain lesion in the pons the deviation is permanent. In a case reported by me to the Clinical Society (Trans., vol. v., p. 173) there were various evidences of lesion in the pons, one of which was persistent deviation of the eyes to one side. The patient was an old soldier who had suffered from syphilis. He walked feebly and staggered, but moved both legs equally well. There was no obvious loss of power in either arm or hand; and though he said the right hand felt dead, sensation, when tested, did not appear to be much affected. There was thus no hemiplegia of the limbs, and the tongue was protruded straight, but the left side of the face exhibited motor paralysis, while over the right half sensation was markedly impaired; the soft palate, moreover, was paralysed, causing the articulation to be nasal and indistinct, while deglutition was difficult. The paralysis of the left face was not the "facial paralysis of Bell," but "facial hemiplegia," not affecting the orbicularis oculi, and it was associated with lateral deviation of the eyes to the right, which was conspicuous and permanent throughout his illness of two months. Had there been paralysis of the portio dura and of the sixth (complete paralysis of the left face, with unclosing eye and internal squint) the case would have been simply one of lesion affecting the combined nuclei of the portio dura and sixth; but the condition was altogether different. The diagnosis made was syphilitic tumour in the pons and medulla; and after death, which was sudden, two small tumours were found in the middle line near the floor of the fourth ventricle: one in the medulla, which would cause the difficulty of deglutition; the other in the pons, exactly in the situation to cut off the communication between one third nerve-nucleus and the other sixth, while the facial hemiplegia and the ocular deviation showed that the fibres from the hemisphere to the facial and sixth nuclei were divided. It had rendered impossible the reversing of the current, so the deviation became permanent. Other cases of the same kind might be mentioned which tend to confirm the hypothesis of the association of motor nerve-nuclei in the cord. It is not a trifle to establish any fact which throws light on the mechanism of the nervous system.

The principle of association of nerve-nuclei, which has explained so many points in regard to motion, is capable of application to the association of sensory nerve-nuclei, and affords us some exceedingly interesting explanations of otherwise incomprehensible phenomena; but I can now only allude to this topic as an illustration of the important bearing of the symptom of the conjugate lateral deviation of the head and eyes, which I have made the subject of my clinical lecture.

[1] When this lecture was delivered, an interesting article by Professor Landouzy, of Paris, was appearing in the *Progrès Médical*, which I have since, by the kindness of M. Landouzy, received in a completed form. In this also the contrast between paralytic and convulsive deviation is pointed out, and the attempt is made to localise the cortical centres of the movement. A fact of special interest to me which it contains is the demonstration of the fibres connecting the sixth and third nuclei.

MR. BRYANT, of Guy's Hospital, has been appointed Examiner in Surgery, in place of the late Mr. Callender, with Mr. Luther Holden.

Croonian Lectures
ON
SOME APPLICATIONS OF PHYSICS TO MEDICINE.

Delivered at the Royal College of Physicians of London, March 1879,

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LECTURE III.—PART II.
THE RATE OF THE HEART'S HYPERTROPHY.

IT is obvious from what has already been observed that hypertrophy of the heart is to a great extent physiological, and even salutary. The main difficulty is to draw the line between these forms and others which are distinctly morbid. The effect of training in causing a precarious state of health was recognised even in Greek times, and is formulated in the axiom ὁ γέμνασται ἀκροφύλαξ πρὸς ὑγίειαν. Still more is the condition of discontinuing training liable to sudden accidents. The gymnast, in fact, seems somewhat to resemble a woman after parturition, the circulation being full of disintegrating, instable, and explosive muscular débris.

Dr. Ord has so well stated this in a letter which he kindly sent me that I cannot refrain from quoting it. "The occurrence of hypertrophy," he says, "in relation to muscular exertion is a matter of great moment for our better classes. I have seen many cases of great hypertrophy associated with training and athletics. With these comes arterial tension, probably as a protective arrangement. The hypertrophy does not seem to be a bad thing while the exercise remains a habit, but when this ceases, and a sort of involution of the heart takes place, I believe that disease often arises. It may also arise in nervous affections, and is certainly associated with bad cases of hypochondriasis, in which there is no evidence of renal or of valvular disorder."[1]

The next intermediate stage between health and disease has already been commented on in speaking of the hypertrophy which waits on certain trades, such as those of paviour, hammerman, or topsawyer. To these should be added a different class—that of divers—in whom the stress of suspended respiration, and consequent pulmonary capillary stasis, falls on the right, instead of the left, auricle and ventricle. In passing from physiological through functional processes, and those due to trade or occupation, Rosenbach's experiments again come to our aid. He shows that the permanent overaction of the heart necessary to maintain the blood-pressure leads to its hypertrophy. Dr. Haughton has also kindly pointed out to me in a letter an important step in the sequence of causation. He says, "It has occurred to me in observing the post-mortem of cases of pneumonia, that the heart has time to become sensibly hypertrophied during the illness."

To attain fully to the law of hypertrophy it will be necessary to record a large number of observations in which the duration of the cause has been accurately noted. These could then be plotted out, with Time as Abcissa, and increase of Weight as Ordinate. Ultimately, no doubt, curves would be reached in which the effect of each valve and every lesion should prove some definite fraction of the total energy. It is, however, difficult to obtain uncomplicated cases in which these data, usually neglected, can be accurately specified. I propose therefore to divide provisionally the elements of cardiac work into four, as follows:—1. Statical pressure. 2. Inertia of the blood-mass. 3. Capillary resistance. 4. Pericardial friction.

My present object is to record briefly some cases in which one only of the above-named causes of increased strain was at work, and thus, by coupling together increase of weight with a fairly accurate statement of the time which had been occupied, to obtain an estimate of the rate at which the hypertrophic process proceeds in each instance.

These cases are four in number:[2] two of valvular disease of the aortic valve, arising from injury, without any concomitant blood-disease (No. 2); one of adherent pericardium, dating from a known commencement, unaccompanied by valvular or blood-disease, and showing the hypertrophy due to simple increase of friction in the propelling machine (No. 4); one of congenital or very old atrophy of one kidney, increasing (No. 3) the resistance offered by the capillary circulation, without valvular or pericardial disorder.

CASE 1.—A robust man, aged thirty, was kicked by a horse on the front of the chest. The animal lashed out with both hind legs at once, and landed a hoof fairly on either side of the sternum. This occurred on Oct. 2nd, 1875. The man immediately began to suffer from short breath and other signs of valvular disease of the heart. In spite of this he managed to keep at his occupation of groom until February 2nd, 1876. On the 27th of the same month he died. On the following day the heart was found to measure transversely 8½ inches, and in circumference 14 inches while *in situ*. It weighed 29 oz. The aorta was laid open in front, and the condition of its valves examined. On allowing a stream of water to run into the vessel, there was free flow into the ventricle. On looking into the valves from above, a triangular aperture was seen between the flaps, which appeared to be formed in the following manner. The posterior and the right anterior segment acted well, and were in contact along a great part of their adjacent borders. The left anterior segment, however, scarcely acted at all, its free border being widely separated from the edges of the other segments, and turning downwards towards the cavity of the ventricle. Its edge was puckered and folded, as if an effort had been made to fold it downwards. The whole of the segments were somewhat rigid and thickened, free, however, from atheroma and vegetations. The mitral valve was healthy, and acted well. The aorta was not materially diseased. All the other organs were healthy. From the injury to the day of death, 147 days, or exactly 21 weeks, had elapsed.

CASE 2.—A dock-labourer, aged thirty-six, also in St. Thomas's Hospital, had been suddenly attacked when pulling at a sugar hogshead. His hands slipped, struck him a severe blow on the left side of the chest, and he fell backwards. He immediately felt severe pain in the region of the heart, and in the evening his breathing became difficult. He died three months and a half after the injury. The heart was found to be greatly enlarged, weighing twenty-three ounces. The left angle of the posterior semilunar segment at the aortic orifice was found to be torn from its attachment, so that it was quite loose, and readily admitted of retroversion, allowing free regurgitation from the artery into the ventricle.

CASE 3.—A French waiter, aged twenty, came into St. Thomas's for acute rheumatism. On Jan. 12th, 1878, he had a sudden attack of pericarditis, from which he had been perfectly free before. This proceeded to total adhesion, and after leaving the hospital for a time he returned and died on July 7th, exactly 176 days, or twenty weeks and a day, from the commencement of the disease. All the valves of the heart and all other organs in the body were substantially healthy. The pericardium was, however, firmly

[1] A case has occurred since the delivery of this course which so fully bears out Dr. Ord's views that I venture to place it on record. A young man of seventeen, one of the best pupils of the City of London School, who had been reading overhard for the examination of the Royal School of Mines, was brought to me with the most violent palpitation and angina I ever saw. In spite of his good social standing, I advised him to come into Arthur ward, St. Thomas's Hospital, chiefly for the sake of rest and surveillance. We discovered no morbid condition of heart or pericardium, although there was marked hypertrophy. On the slightest excitement the pulse ran up to 150 beats per minute. The sphygmograph showed, as it does in exophthalmic goître, the purely functional and illusory nature of the excitement. By the use of the interrupted current to the pneumogastric (or more probably the depressor) nerve, and the administration of bromides, all the alarming symptoms were rapidly subdued, and the patient was enabled to return to his studies within a month from the commencement of treatment. An exactly similar case occurred to the writer some years ago, the patient having since taken the degree of Wrangler at Cambridge. There seems no definite reason why the nervous stress of overstrain should not fall on the regulating apparatus of the heart as well as on the emotional system, as in hysteria; the basic cerebral ganglia, as in functional epilepsy; or the vaso-motor system, as in exophthalmic goître

[2] While these lectures have been in course of publication, a third typical case, fairly free of complication, has occurred to me, in which the heart, under aortic strain, and consequent unrelieved inertia (No. 2), has reached the enormous weight of 40 oz. This, and one or two others, I hope to give in an Appendicular paper.

and universally adherent. The heart itself weighed nineteen ounces and a half.

CASE 4.—A boy, fourteen years of age, was admitted into St. Thomas's Hospital on August 22nd, 1876, suffering from obvious hypertrophy of the heart, but without evidence of valvular disease. I considered the case to be, like the last, one of adherent pericardium. It was difficult to obtain any distinct history from so young a person, but, from information tendered by his relations, the following facts were established:—He had been quite well until three months before admission. He then "caught a severe cold," accompanied by cough, pain in the chest, short breath, and prostration. When first seen he was pale, œdematous in the face, suffering much from spasmodic cough. The heart was obviously enlarged, as was also the liver. The temperature was 98·4°. The urine of sp. gr. 1016, containing much albumen; this, however, disappeared after a fortnight's rest, and never returned to any appreciable extent. A sphygmographic tracing of the pulse at the wrist, taken two months after his admission, showed the remarkable fact that the heart's pulsation was entirely under the command of respiration, so that when he held his breath the tracing was reduced to a faintly undulated line. On the other hand, when he coughed, a wave of great force and extent was sent through the artery, somewhat resembling the healthy pulse-tracing. He had occasional slight hæmoptysis and increased dyspnœa, under which symptoms he sank on Nov. 20th, 1876. The pericardium was found entirely free from adhesions; the heart weighed 19½ ounces, was greatly hypertrophied, but without any valvular lesion. The aorta and great vessels of the neck were extremely atheromatous, much thickened in places, but quite pervious. The left kidney was atrophied, flattened, and of triangular shape, somewhat resembling the suprarenal capsule. Its vessels and the ureter were normal and pervious, but the vessels were only about half the size of those on the right side. The arteries at the base of the brain were extremely atheromatous; the atheroma extending throughout their branches as far as the small vessels spreading over the convexity of the hemispheres.

On comparing the above cases, we obviously have three different causes, all of a physical character, but producing one and the same result—namely, hypertrophy. In the first two the permanent obstacle between the heart and the arterial system was broken down, and the momentum of the blood-column was thus permitted to fall back upon the muscular structure itself, instead of being warded off by the retentive tissue of the aortic valves.[3] The quantity propelled at each stroke can only have been the difference between what was admitted through the mitral orifice and what regurgitated through the partially patent aortic orifice. Besides this, there must have been the constant backward pressure of arterial elasticity bearing on the cardiac walls, even during the period of rest in the circulatory cycle. In the third case an impediment was caused to the action of the heart itself by additional friction due to the destruction of its serous covering, and the additional mass of false membrane as well as adjacent tissues, which it was thus compelled to keep in movement at every contraction.[4] In the fourth and last case the only assignable cause for the great enlargement must be the increase of what Dr. Haughton has named the capillary coefficient. It here stands for the resistance, not of the capillary system alone, but of the whole arterial network, from the aorta onwards, which is described as highly rough and atheromatous. In the transparent structures on the surface of the brain this condition could be seen to penetrate even into the smallest vessels, and it may therefore be fairly assumed to have been universal. It has been shown by Dr. Bright that disease of the kidneys, unconnected with valvular disease or disease of the aorta, has a tendency to produce enlargement of the heart. Dr. Peacock proves this statistically by giving the proportion of enlarged hearts as eleven out of eighteen cases examined. The smaller arterioles in cases of renal disease have also been demonstrated by Dr. Johnson to possess a largely increased amount of muscular fibre. Whether the hypertrophy in this case was originally due to this cause, or went backwards to the insufficient renal excretory surface supplied by the single healthy kidney, it is difficult to say. Placing the cases in a tabular form:—

—	Duration of illness.	Normal weight.	Actual weight.	Remarks.
Case I.	21 weeks	9oz.	29 oz.	20 oz. gained in 21 weeks
,, II.	14 weeks	9 oz.	23 oz.	14 oz. ,, in 14 weeks
,, III.	25 weeks	9 oz.	19½ oz.	10½ oz. ,, in 25 weeks
,, IV.	26 weeks	7 oz.	19½ oz.	12½ oz. ,, in 26 weeks

The rate of the first two cases due to aortic lesion is very similar, being nearly an ounce per week; the third, due to pericardial friction, is about half this amount; in the last, though the actual weight gained is not far different from that of the third, the ratio to the normal size of the organ in a boy of fourteen is considerably greater, and the hypertrophy in proportion to the muscular development of the patient much more marked. It may be noted that the pregnant uterus increases by about twenty-four ounces in nine months or thirty-six weeks, or two-thirds of an ounce per week—a quantity far less than that shown by the heart.

[3] Dr. Haughton writes on this subject: "The chief resistance in the open condition of the valve arose from the *vis inertiæ* of the blood column, which had to be set in motion afresh at every heart-stroke."

[4] Since the delivery of the lecture, I have to thank Dr. Wilks for his kindness in sending me a most interesting and suggestive paper on "Adherent Pericardium as a cause of Cardiac Disease," from which I have obtained valuable information, to be utilized on some future occasion.

A CASE OF HYDROPHOBIA OR RABIES; RECOVERY.

BY THOMAS MOORE, F.R.C.S. EXAM.

J. L——, aged twenty-six, a carpenter, of medium stamina, who keeps a beershop at a village two miles south of this town, consulted me on Dec. 16th, 1877, about his finger, which had been bitten by a mongrel pug dog about three weeks previously. The wound was on the side of the right middle finger, and was an inch long, with an ashy slough. It healed in about a fortnight, after the application of nitrate of silver and simple ointment. The dog belonged to a neighbour, and flew at him when he was trying to take a piece of meat from it, which it was stealing from his house. It is reported to have bitten two or three other people through their clothes, but they have been none the worse for it. It never showed any symptoms of rabies, nor is there any proof that it was ever bitten by a mad dog. One was at large, however, for some days, and was eventually killed north of this place in the early autumn of 1877, and an order was, in consequence, issued by the magistrates, requiring all dogs to be kept under control in that quarter.

On July 6th, 1878, nearly seven months after the bite, he again applied for advice, and was seen, in my absence, by my assistant, Mr. Warrington. He looked haggard and careworn, was weak and desponding, and complained of severe pain in the bitten finger, shooting up the arm to the back of the head and throat. This he said he had not been free from, for more than a few days at a time, since the wound healed; it was increasing in severity, and prevented him from working; it was generally worse at night, so that he had frequently risen from bed to rub his finger and arm on the carpet, as friction eased it. He complained also of pain at the epigastrium, with a loathing of food, and occasional vomiting. His pulse was feeble and his tongue furred. To take bismuth and taraxacum three times a day.

July 8th.—No improvement. Was seen by my partner, Mr. Cross, who describes him as "being weak and miserable, and looking pinched and careworn, with a restless, anxious manner, as though afflicted with some present evil, and apprehensive of something to come." He prescribed ten grains of bromide of potassium, with five of carbonate of ammonia, every night, in addition to the bismuth.

12th.—More desponding and restless, weaker, and has distressing morbid fancies. As he was evidently much impressed with the idea that his illness was due to the bite, Mr. Warrington recommended that the dog should be killed, and assured him that he would soon be all right. This appears to have had temporarily a good effect on his spirits, and, curiously, the pain disappeared soon after he heard of the dog's death, and never returned.

18th.—Was better for two or three days after the destruc-

tion of the dog, but has gradually relapsed into a more and more desponding and restless state, although he does not seem to dwell so much on the bite. During a greater part of the day he complained of a sticky feeling in the mouth, and there was a considerable secretion of viscid saliva, which obliged him to expectorate frequently. He suffered much from nausea, with occasional vomiting of a greenish fluid; his voice was feeble and hoarse, and he felt so weak and ill that he kept in bed. About 7 P.M. his wife, hearing a noise in his room, went to him, and found him sitting up in bed, looking "wild," and vainly endeavouring to get rid of the saliva, which he said was choking him. Soon afterwards, with an expression of terror, as though some spectre were after him, he started up in bed, and then attempted to rush out at the foot of it, but was restrained by a male friend, whom his wife had summoned to her assistance. He continued to struggle to get free for a short time, and then relapsed into a state of comparative quiet. This fit, as his friends called it, was followed by others of increasing severity at intervals, so that I was summoned, and saw him, with Mr. Warrington, about 8.30. We found him lying in bed, panting and perspiring profusely (the weather being very hot), with half a dozen men around him, who declared that at times they could scarcely hold him. His countenance had a very distressed look, he spoke in a hoarse, whining tone, and was constantly complaining and grumbling, saying that he was being neglected, and accusing those about him of evil intentions towards him; but although he had these and other delusions he would answer questions rationally. The tongue was moist and furred, and there was much viscid saliva in the mouth. Pulse 140, soft and small. Conjunctivæ suffused, and insensible when touched; pupils fully dilated, and insensible to light.

Suddenly, whilst I was examining him, he started forwards, with a wild look and a cry as of terror, and endeavoured to rush out of bed, but was restrained by his attendants, with whom he struggled furiously. All the muscles of his body were rigid, somewhat as in the emprosthotonos of tetanus, but with the struggling added. The face was contorted, but there was nothing like a risus sardonicus; it rather wore an expression of terror. He foamed at the mouth, making a choking sound, and sometimes clutched at his throat with his fingers. When I put my hand on his shoulder, in the endeavour to restrain him, he suddenly snapped at it with his teeth, and continued biting and snarling, or struggling, until the end of the paroxysm, which lasted between two and three minutes. He then sank down on the bed again, and recommenced grumbling and complaining. I watched several of these paroxysms, which were all much like the one above described; the intervals were about four or five minutes in duration. External influences did not seem to have any effect upon the attacks; neither the sight nor sound of water nor any movement of the air brought them on; nor was it possible to check them by speaking either sharply or soothingly. He was very thirsty, and could drink, but with a gulping action. During the intervals his face wore a scared and frightened expression.

At length I injected hypodermically a grain of morphia in solution.[1] At about the usual interval another paroxysm came on; but it was, if anything, a little less severe. Shortly afterwards the pupils became about half contracted. In about ten minutes he had another paroxysm, which was certainly less severe. Soon afterwards the pupils became quite contracted, and he was somewhat drowsy. During the next quarter of an hour he had two slight paroxysms, and during the following hour he only started up wildly two or three times. At the end of that period, as he appeared to be sleepy, I left him, after assuring him that he would get well, and pooh-poohing the idea of his having hydrophobia. I also directed that the room should be kept quiet and dark, and that only one attendant should remain in it; and prescribed a drachm of bromide of potassium in solution every four hours. Diet to be arrowroot or beef-tea.

July 19th.—9 A.M.: Slept for about an hour during the night. Started up wildly three or four times, but was otherwise quiet. Is very desponding, but the morbid fancies are less. Looks very ill and pinched, but not so much distressed, and is so weak that he can scarcely raise himself in bed. Has lost the frightened expression. Pupils half dilated, and acting; conjunctivæ less suffused, and sensible. Pulse 80, very weak. Tongue furred and moist. Can drink naturally. To continue the bromide. — 9 P.M.: Has been quiet during the greater part of the day, but has not slept. Started up several times during the last two or three hours. Much nausea and vomiting of a greenish fluid. Still very desponding, but has no delusions. Morphia injection repeated.

20th.—Slept for four hours during the night. No more startings. Is less desponding, but very weak, and vomits frequently. Pupils and conjunctivæ natural. To take half a drachm of bromide, instead of a drachm, every four hours; and a draught containing half a grain of morphia at bedtime. Diet to consist of beef-tea, milk, &c.

21st. — Much the same. Slept well. Much sickness. Asked for ale, and kept down half a glass. To take half a drachm of the bromide three times a day, and half a grain of morphia every night.

24th.—Has slept well every night. No return of attacks or starting; rather less sickness; otherwise much the same. To discontinue the morphia.

28th.—Has gradually improved. Still much nausea and occasional vomiting. Bowels act regularly; tongue clean. To leave off the bromide, and take an aperient and a simple effervescing mixture.

29th.—Had a sudden attack of bilious diarrhœa, which was controlled by two doses of creasote and opium in pill.

Aug. 3rd.—Improving. Little nausea; no sickness; no return of diarrhœa, but there is a relaxed action every day.

5th.—Very weak and nervous. To take a grain of quinine, with mineral acid, twice a day.

24th.—Again attacked by diarrhœa, with vomiting. To take chalk mixture, with morphia and catechu, three times a day.

29th.—The diarrhœa ceased gradually in about three days. He can now walk about, but is still very weak, irritable, and desponding. To take five grains of bromide of potassium in infusion of bark, three times a day.

Sept. 6th.—Much the same. A large abscess is forming in the right buttock. To take nitro-muriatic acid and gentian twice a day, and a pill of aloes and belladonna every night.

On Sept. 10th the abscess broke, and discharged a considerable quantity of fetid pus. From that time he gradually recovered, with the assistance of an occasional tonic. On Nov. 6th I saw him hard at work, and quite well and cheerful. He did not appear to be apprehensive of a return of the disease, but he "felt certain" that the bite was the cause of his illness. He has continued in his usual state of health to the present time, nearly 18 months after the attack.

Remarks.—Many authorities assert that there has never been a recovery from an attack of genuine hydrophobia. Dollinger,[2] for instance, says, "The uniform termination of hydrophobia is death.....The alleged cures are in all probability based on diagnostic errors." Fortunately, however, this melancholy assumption is not borne out by statistics. A recent writer[3] has collected accounts of 150 cases, which have been treated during the present century, and finds among them 22 recoveries, 10 of which were "undoubtedly genuine."

This case may, I believe, be added to the list of genuine recoveries. Every symptom was particularly well-marked, except the difficulty of swallowing, and that was present to some extent, and would probably have increased, as is usually the case, had the disease progressed. Its occasional absence is not uncommon, especially in the earlier stages of the disease. Thus, Berkenhart,[4] writing so long ago as 1783, says: "I am inclined to assert that hydrophobia is not generally a symptom of the disease produced by the bite of a mad dog. It rarely happens that the patient has any aversion to water, or any other liquid, until by experience he finds an insuperable difficulty in swallowing." Poland also says[5] "the dread of water, the almost characteristic symptom in man, is not always present, as may be proved in recorded cases." Dollinger himself remarks,[6] "In exceptional cases the patient is able to swallow fluids during the entire course of the disease, although the act is accompanied by pain." In a fatal case treated in the Hertford Infirmary,[7] in 1876, the patient "could drink with spasm"; and in a case treated in the Glasgow Infirmary,[8]

[1] Prepared by Messrs. Squire, of Oxford-street.

[2] Ziemssen's Cyclopædia, vol. iii., p. 494.
[3] Report of Special Commission of Medical Press, 1878, p. 71.
[4] Loc. cit., p. 130.
[5] Holmes's System of Surgery, vol. i., p. 691.
[6] Ziemssen's Cyclopædia, vol. iii., p. 489.
[7] THE LANCET, 1876. [8] Ibid.

in the same year, the patient on admission "drank a tumbler of water with an effort." Lastly, in the report of a case[9] which was treated in the Manchester Infirmary by curare, and ended fatally, it is stated that "his aspect denoted terror, and his voice was very husky, but there was no marked laryngeal spasm, nor did he evince any emotion on hearing a tap of water turned on."

My case was certainly not one of tetanus. Could it have been one of hysterical mania—the *hydrophobie imaginaire* of some writers? I think not, for it is improbable, to say the least, that the mind of an illiterate man, who had probably gained no knowledge of the disease from books, could have exactly *imagined* all the other symptoms, which he had never heard of, to the exclusion of the fear of water, the one which would appeal most forcibly to his imagination, and which was most likely the only one he was acquainted with. It may be said that the subsidence of the pain after the destruction of the dog points to its having been a spurious attack. This singular fact, however, tells both ways, for I cannot but think that a mental impression so great as to cause the cessation of severe and long-continued pain would also have prevented the appearance of the paroxysms, had they been due to the effects of imagination. On the other hand, the quasi-critical discharges of diarrhœa and pus, after the last of which he began to get decidedly better, tend rather to show that the attack was one in which there was blood-poisoning.

Whether rabies was latent in the system of the dog can, unfortunately, never be known, and I have not ceased to regret that it was destroyed.

With regard to the remedies employed, I was led to adopt them through noticing that in several cases reported in the medical journals the hypodermic injection of morphia appeared to be at first followed by an amelioration of the symptoms, whilst, however, its good effects were never permanent. It seemed advisable, therefore, after securing its primary soothing action, to follow it up by some drug which would calm nervous excitement, without producing the bad effects which sometimes follow the long-continued exhibition of morphia. Bromide of potassium does this in a remarkable degree, and it is quite probable that it materially assisted in securing the happy result in this case. There could be no doubt about the beneficial effect of the morphia, as the patient became quieted so soon as its usual physiological action on the pupil was apparent. I am certainly inclined to attribute much of the success of the treatment to reassuring the patient's mind, for I cannot help thinking that the utterly hopeless character which the disease has, perhaps undeservedly, acquired, may have helped to swell its bill of mortality by establishing a feeling of despair in the minds both of the patient and of his medical attendants.

It is, of course, impossible to say whether this particular combination of remedies will again effect a cure, but I think it is at least worth a further trial.

Petersfield.

CASE OF

BILIARY FISTULA COMMUNICATING WITH THE LUNG.

By J. DRESCHFELD, M.D., M.R.C.P.,

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Biliary fistulæ are most frequently caused by gall-stones; occasionally, however, hydatid cysts of the liver or an hepatic abscess have been known in their course to give rise to the formation of such fistulæ. Owing to the fact that the larger gall-stones are formed either in the gall-bladder or in the large biliary ducts on or near the under surface of the liver, it will be found, in all cases hitherto described, where biliary calculi were the cause of the fistula, that the abnormal communication was established between the biliary passages on the one hand, and an abdominal organ or the skin covering the abdomen on the other. Cruveilhier gave the following classification of these fistulæ, numbering them in the order of their frequency. 1. *Cutaneous fistulæ*, where the abnormal opening was formed on the external skin. 2. *Gastro-intestinal*, caused by the passage of a biliary calculus through any part of the intestinal tract in any other way than through the ductus choledochus. 3. *Vascular:* passage of the calculus into the portal vein. 4. *Genito-urinary*. Of this class but few cases are on record; they deserve mentioning, owing to its rarity and peculiarity. Thus P. Frank relates a case where during pregnancy adhesions formed between the gall-bladder and the enlarged uterus, and where during labour rupture of the gall-bladder and effusion of bile into the uterine substance took place; and Faber gives a case where, without the presence of jaundice, bile and small biliary calculi were passed by the urine, and where the cause was assigned to an adhesion between the gall-bladder and the pelvis of the right kidney, and subsequent rupture into the latter.

Pulmonary biliary fistulæ, on the other hand, characterised by the evacuation of large masses of bile with the sputum, may be said (to judge from the cases on record) to be due to an hepatic abscess or an hydatid cyst of the liver primarily bursting into a biliary duct, and thence, by secondary inflammatory changes, leading eventually to the formation of an abnormal communication with the lung. In the following case, however, where the prominent symptom was the expectoration of large masses of bile with the sputum, without the patient being in the least jaundiced, there was found after death a biliary calculus which had been formed near the upper surface of the liver, and which had led eventually to the formation of a fistulous channel between a large bile-duct and the lung. As I have not been able, after a very diligent search, to find a similar case published, I have thought the case worthy of being put on record.

William B——, aged sixty-two, labourer, married, was admitted into the Manchester Infirmary on April 23rd, 1879, when the following notes were taken by Mr. Brooke, late resident clinical clerk.

The patient had enjoyed good health till eight years ago, when he suffered from hæmoptysis, for which he was then treated at the infirmary, and which was after a time suppressed; shortly after he had an attack of inflammation of the bowels, with great abdominal pain, which laid him up for weeks; since then had been in perfect health till September, 1878, when another attack of pulmonary hæmorrhage occurred, which, however, soon subsided; since then had suffered more or less from cough and expectoration, and some months before admission into the infirmary had noticed the expectoration to be bright yellow, a character which it had since retained. His general health, too, began to fail, and he was at last obliged to give up work. No history of alcoholism or syphilis; never had jaundice; had never, except during the attack of inflammation of the bowels, eight years ago, suffered from pain or tenderness over region of liver; appetite good till lately; had always suffered from constipation; never had dysentery or ague.

On admission the patient was found to be of middle stature, thin but muscular, and slightly emaciated. There was no jaundice; skin was moist; no head symptoms present; no affection of any of the cerebral nerves; no arcus senilis. Thorax slightly barrel-shaped; antero-posterior diameter abnormally great, owing to kyphosis; chest movements normal, but little expansion on deep inspiration. There were slight dyspnœa and irritating cough. Examination of lungs showed slight emphysema and bronchitis in both. Patient brought up a large quantity of sputum of thick, viscid, slightly frothy quality, of deep-green colour, looking exactly like frothy bile. On standing the sputum separated into two layers, an upper one quite green and fluid, and a lower one which is yellowish and thick. The lower layer was found to consist of pus-cells, epithelial and granule cells, all tinged by bile colouring matter, while the supernatant green fluid gives all the reactions for bile. The sputum amounted to from eight to ten ounces per diem; it was coughed up without any great effort, and when patient assumed the recumbent position it rose in the throat and was brought up without coughing; hence patient was obliged to sit up. No cardiac hypertrophy or dilatation; heart-sounds normal but weak; pulse 64, compressible, soft, and thin; superficial veins not prominent. Tongue covered with thick yellow fur; bad taste in mouth. Abdomen retracted; no fulness or tumour; no pain or tenderness on deep or superficial pressure; liver dulness normal in all its relations (upper hepatic dulness commenced in nipple line at upper border of sixth rib, in anterior axillary line at seventh rib, while its lower limit did not reach beyond the

[9] Bdt. Med. Jour., Dec. 14th, 1878.

line of the ribs); no crepitation heard on auscultation over hepatic region. Spleen normal. Appetite poor; flatulence after food; slight constipation; fæces of normal colour. Urine: straw-yellow, clear, acid, sp. gr. 1018; no albumen, sugar, biliary colouring matter, or biliary acids. Temperature 98°.

The only prominent symptom, besides the moderate amount of emphysema and bronchitis, being the expectoration of large masses of bile, without the presence of any jaundice, the only admissible diagnosis was "pulmonary-biliary fistula." The primary cause of such fistula was, however, difficult to arrive at. Against an hepatic abscess there was to be set the history of the case, the absence of pain or tenderness over region of liver, the absence of diarrhœa, the very large amount of bile, and the very small amount of pus in the sputum. Against an hydatid cyst was the absence of evacuation of large amount of fluid per sputum in the history of the case, and, further, the normal size and relations of the liver. There remains thus only an idiopathic inflammation of a bile-duct, or an inflammation round such a duct, produced by a gall-stone situated in the liver itself (periangiocholitis).

Idiopathic angiocholitis, however, is extremely rare, and against it was the fact (evidenced by the fæces) that normal bile passed into the duodenum, showing that only a part of the liver could be so affected; whilst, finally, the history of the case gave no clue which could lead one to suppose that gall-stones had formed in the liver and produced periangiocholitis, which in its turn would set up a fistulous communication with the neighbouring organ; yet after death such was found to be the case.

The symptoms remained the same for some days. The quantity of bilious sputum expectorated in twenty-four hours measured from nine to ten ounces. On May 3rd there supervened an attack of vomiting of bilious matter, followed by profuse hæmatemesis. The physical signs remained the same. The urine now contained bile-colouring matter, but no albumen or blood. There was no jaundice.

May 7th.—Patient continues to vomit; the vomited matter consists sometimes of food, sometimes of bile, and other times of blood. Chest: In right supra-scapular region bronchial expiration, subcrepitant râles, and increased vocal resonance; in right axillary region tympanitic percussion, weak vesicular breathing, and mucous râles.

9th.—Patient much weaker. Physical signs the same; but incessant hiccough, and with every hiccough bilious matter is brought up. Quantity of sputum, twelve ounces in twenty-four hours. Pulse 70, very weak; temperature 97·8°.

13th.—Condition much worse. Hiccough and sputum continue. Great prostration, but no pain; sensorium free. No food of any sort retained. Pulse 70; temperature 97·7°.

The patient now gradually sank, and died on May 15th at 7.50 P.M.

The treatment was purely symptomatic—milk and beef-tea, stimulants, ice, hydrocyanic acid, and bismuth.

Autopsy (by Dr. Bradshaw, pathologist to the Infirmary).—The chief changes were found in the stomach, lungs, liver, and peritoneum. The stomach contained dark, grumous masses; it was dilated and softened, and its mucous surface was the seat of numerous ecchymoses. The intestines were found matted together by numerous firm fibrous bands; the peritoneum was thickened in many places. The left lung was the seat of emphysema and congestion; the bronchi slightly dilated, filled with frothy mucus not tinged by bile. The upper surface of liver and lower surface of right lung were bound down to the diaphragm by old adhesions, so that the two organs had to be removed together; it was then found possible to free the diaphragm from these adhesions above and below, till the central tendon was reached; this was converted into a thick, firm, white mass, half an inch in depth, to which lung and liver were inseparably connected. The liver was otherwise normal in size and appearance; its lower surface was traversed by numerous fibrous bands, one of which was tightly stretched across the neck of the gall-bladder, causing obliteration of the cystic duct. The gall-bladder was dilated, filled with clear mucus without a trace of bile, free from gall-stones, and completely shut off by the adhesion outside from the cystic duct. On cutting into the liver there were seen the sections of bile-ducts, some perfectly normal and containing clear bile, others dilated, and filled with thick, creamy, yellow fluid; these dilated ducts could be traced to the upper surface of the liver, where they were seen to terminate in a small cavity, situated on the under surface of the altered tendon of the diaphragm, and filled with the same yellow creamy fluid. In this cavity there was found a small branched calculus, consisting of an outer white layer (lime salts), and a darker nucleus (cholesterine and biliary colouring matter); from this cavity a narrow tortuous canal passed into the lung, where it communicated with a bronchus. The liver was normal in structure except near the dilated bile-ducts, where it was the seat of a cellular infiltration, but no true abscesses were discovered. The upper lobe of right lung was hepatised, the lower lobes were in a state of hypostatic congestion. The walls of the fistulous canal consisted of firm fibrous tissue, and the lung-tissue in its neighbourhood was œdematous and stained yellow. The common bile-duct was pervious, and could easily be traced into the duodenum.

Remarks.—The results of the post-mortem examination permit of the following explanation of this most unusual case. The patient's history showed that eight years before the fatal attack he had suffered from severe peritonitis, and after death there were found, as resulting from this, firm adhesions on the under-surface of the liver, and firm bands between the intestines, evidently of very old standing; one of these bands caused the constriction of the neck of the gall-bladder, and in consequence of this no bile could any longer pass into the gall-bladder, which was found filled with clear mucus (dropsy of the gall-bladder). Owing to the occlusion of this viscus, there must have been stagnation of bile, and this would naturally be greatest at the upper surface of the liver—i.e., furthest away from the large bile-ducts. In the course of time the stagnating and inspissated bile gave rise to the formation of the gall-stone found after death; this calculus, once formed, would act as a fresh irritant, would set up fresh inflammatory changes, adhesions, and suppuration in the neighbourhood, and thus eventually lead to the formation of the fistulous communication.

As already stated, I have not been able to find a similar case on record. Some cases, however, are mentioned by Barth and Besnier (article "Biliare," in the *Diction. Encyclop. des Sciences Médicales*), where gall-stones had formed within the liver, and where some of the bile-ducts were found dilated and filled with thick creamy bile, just as in the above case, but in no instance did there exist a fistulous communication with any other organ.

Manchester.

THREE CASES OF LITHOTRITY AT ONE SITTING.

By G. BUCKSTON BROWNE.

IT is now more than a year since Professor Bigelow, of Harvard University, demonstrated before the Clinical Society of London, on an artificial bladder, his method of washing out fragments after the operation of lithotrity; and at the same time he published it as his opinion that the mechanical injury produced by fragments of stone allowed to remain in a bladder after a sitting of lithotrity is greater than that produced by the instrumentation necessary for their prompt removal. He argued, therefore, that the more entirely a bladder can be emptied of its stony contents at the first sitting, the better for the patient. For some time before this the practice of removing small stones at one sitting had been growing into favour, and Sir Henry Thompson had again and again declared that with increased practice and skill he was able to do more at a sitting than he could advise younger and less practised surgeons to attempt. It is doubtful, perhaps, if Professor Bigelow has proved that the bladder and urethra are more tolerant of instrumental interference than they have long been supposed to be, but it seems probable that increased experience will lead the profession to acknowledge the truth of his dictum, that it is the injury done by fragments, and not that done by instruments, which is the chief source of the misfortunes which sometimes follow a crushing. Professor Bigelow, in common with all surgeons experienced in urinary surgery, would not desire anyone to be tempted by his observations to lose that wholesome respect for the extreme sensibility of the

male urethra which is so becoming to the surgeon contemplating any interference, however slight, with that canal.

Since Professor Bigelow's demonstration, many cases of lithotrity performed upon his principle, although I believe not with his instruments, have been put on record. Sir Henry Thompson has published thirteen cases, Mr. Cadge five, and other surgeons have published single ones. As a further contribution I beg to offer a sketch of three cases which I have lately operated upon while in charge of Sir Henry Thompson's practice during his recent holiday. In all three instances his lithotrites were used, and the bladder washed out through a No. 16 (English) evacuating silver tube, with his india-rubber aspirator described in THE LANCET for Feb. 1st, 1879. I have followed Sir Henry's advice, and have avoided irritating the bladder by a prolonged search for the last fragment. In each case within a week of the operation the bladder was carefully explored to make sure no particle of stone remained; in the first case only a small piece was found and removed. On each occasion ether was administered by Mr. Clover.

CASE 1.—R. H——, aged sixty-nine, was seen with Dr. Dobell on Sept. 18th. For eight years he had had pain and trouble in micturition. Three months before he had learned to pass a catheter night and morning. He complained of a "queer sensation along the penis" after passing a catheter. He stated that he was worse if he moved about, and that the pain along his penis was constant. He was sounded, and stone discovered.

On Sept. 20th lithotrity was performed, and the stone proved to be multiple uric acid. One hundred and twenty grains were removed in less than fifteen minutes. On Sept. 24th he was examined under ether; a small fragment detected and removed. Two days later he was free from pain. He could hold his water two hours and a half, and said he felt much relieved. On Oct. 3rd he went home. Three weeks after he complained of a little pain; a lithotrite was introduced, and forty grains of phosphatic matter removed. On Nov. 7th his son wrote—"Water much improved; he is easy from pain."

CASE 2.—C. W——, aged sixty-three. I saw the case with Dr. Palfrey. He had long passed a catheter twice daily. He now made water every hour, day and night. Had much pain at the end of micturition. Moving about gave much suffering. He had not passed his catheter for a week on account of the pain. He was sounded, and a considerable-sized phosphatic stone discovered.

On Oct. 8th the stone was crushed, and 160 grains removed in twelve minutes. Next day he held his urine two hours, but had some soreness. The urine was free from deposit. The temperature was normal.

On Oct. 15th he was put under ether, examined fully, and nothing found. He rapidly improved, and on the night of Oct. 19th only rose once to pass water. In the daytime held his water two to four hours. No pain at all in micturition or on moving about. On the 20th went home, and has since remained perfectly well.

CASE 3.—C. T——, aged sixty-six, seen with Dr. R. T. Smith, of Haverstock-hill, on Oct. 7th. Sir Henry Thompson had, on Aug. 14th, found a rough, hard, medium-sized stone. The patient's sufferings had increased, and at length became almost unbearable. Micturition was frequent, and the urine was loaded with mucus.

On Oct. 10th I performed lithotrity, and removed in ten minutes 154 grains of mixed urates and phosphates. Improvement was immediate, so that next day he was able to hold his water four hours.

On Oct. 12th there was some irritability of the bladder, and the urine contained mucus. A catheter was passed, and the bladder washed out. Two hours after he had a rigor, followed by no ill effects. He rapidly recovered, and on Oct. 24th a careful sounding failed to detect anything. The patient has since continued perfectly well; he has no pain, and his urine is quite free from deposit.

TESTIMONIAL TO DR. ANDREWS, OF BELFAST.—A committee has been appointed to receive subscriptions for the purpose of commemorating the retirement of this gentleman from the Vice-Presidency of the Queen's College, Belfast, by a bust or portrait to be placed in the College, and a prize or scholarship to be founded in the same institution in connexion with chemical science. Dr. Andrews is a chemist of world-wide fame; and four years since acted as President of the British Association at the meeting of that body in Belfast.

ON TRANSITORY ANÆSTHESIA AFTER UNILATERAL CONVULSIONS, WITH OBSERVATION ON PERCUSSION OF THE SKULL.

BY ALEXANDER ROBERTSON, M.D., F.F.P.S.G.,
PHYSICIAN TO THE TOWN'S HOSPITAL AND ASYLUM, GLASGOW; LECTURER ON MENTAL DISEASES IN THE GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE, ETC.

IT is well known that an ephemeral loss of power in the arm and leg of one side may immediately follow an attack of convulsions which has been confined to, or, at all events, has chiefly affected, that side. It does not, however, appear to have attracted attention that a brief impairment or loss of sensibility in the same members may be, and probably generally is, associated with this form of palsy. The following case, lately in this hospital, illustrates their coexistence.

J. N——, age thirty-nine, engineer, of average intelligence, has been epileptic for upwards of seven years, and the fits have occurred about once in four or five weeks; the longest interval between them, previous to the last seizure, about five months since, having been six weeks. They have always begun on the right side, generally in the hand, but sometimes in the foot. Though beginning in this way, they have often ultimately involved the whole body, and such seizures are accompanied by unconsciousness; but some are confined to the right arm or leg, with retention of consciousness (Jacksonian epilepsy). There is always an interval of a minute or two before the convulsions become general. Patient feels acute pain in the arm and leg when they are convulsed.

I happened to enter the ward at the close of the convulsive stage of the last fit, which was one of the more severe kind. His mind had become quite clear within five minutes after my entry. I then proceeded to test the motor and sensory power in the right extremities, which, as in previous seizures, had been much more convulsed than those on the left side. The following were the results:—1. Motor power: Ten minutes after the fit ceased, no pressure was felt by me when he tried to squeeze my fingers with his right hand, though he grasped them moderately firmly with the left one. At twenty minutes (tested by Duchenne's dynamometer) pressure exerted by right hand 2 lb., by left one 35 lb.; at fifty-five minutes, right hand 26 lb., left 37 lb.; at two hours, right hand 54 lb., left 51 lb. Patient is right-handed. At twenty minutes he could scarcely raise right leg from the bed, but afterwards power was recovered *pari passu* with the arm. 2. Sensation: At ten minutes after the fit he scarcely felt sharp pinching in the right hand or foot, though sensibility was not appreciably diminished in the left ones; at twenty minutes (tested by æsthesiometer) the two points of the instrument were felt as one at eight inches, both on the front and back of the right hand and wrist, whereas they were felt as two at an inch and a quarter on the palm, and at three inches on the back of the left hand; at an hour both points were recognised on the front of the middle finger of the right hand at one inch, and on the corresponding finger of the left hand at three-quarters of an inch; sensation being thus all but restored in the affected hand.

In this case the character and course of the convulsive action point to the motor region of the surface of the brain on the left side as the probable seat of lesion. And this probability is strongly corroborated by the fact that on tapping the head somewhat firmly, with the finger used as a plexímeter, no pain was felt anywhere except on the left side in an area about two inches in diameter, the centre of which is about two and a half inches above the highest part of the left ear.[1] The patient was not aware of any disagreeable sensation in that part of the head till the skull was percussed. This observation was made four days after the fit, and, acting on this distinct indication of local disease, a succession of cantharides blisters was ordered to the region of pain; and at the present time nine have been applied. Along with the first of these local applications, a change was made in the constitutional treatment. Previously he had been getting iodide of potassium in eight-grain doses, thrice daily, for weeks together, alternating with fifteen-grain doses of the bromide of potassium

[1] The patient was shown, and this point demonstrated, at a meeting of the Glasgow Pathological and Clinical Society.

thrice daily; and sometimes the two medicines were combined; but there was no abatement of the disease. Thereafter the iodide was given in thirty-grain doses twice daily, along with thirty grains of the bromide at bedtime only; and both have been continued in these doses since that time. There has been no symptom of either bromism or iodism. The result has so far been gratifying, seeing so long an interval has elapsed since the last fit. Not improbably, the disease in this case may be syphilitic in its nature, though there is no clear evidence of constitutional syphilis

Glasgow.

A CASE OF
CALCULUS OF THE CÆCAL APPENDIX, WITH REMARKS.

By W. MAUNSELL COLLINS, M.D.

A YOUNG gentleman, about eleven years of age, previously in good health, was suddenly attacked with vomiting, pain in the abdomen, high fever, and constipation. It was at first thought to be an ordinary "bilious" attack, but the pain and vomiting increased, with abdominal distension and soreness on pressure over the right iliac region; the pulse became rapid and feeble; the tongue dry and furred; general peritonitis supervened, and the boy died on the third day.

In consideration of the obscurity of the case and the rapidity and severity of the symptoms, the parents were induced to allow a necropsy to be made. There was extensive peritonitis, the intestines being everywhere agglutinated together. Over the right iliac region the abdominal parietes were much thickened, and the fasciæ and cellular tissue presented here a semi-gangrenous appearance, which was continuous with the parietal layer of the peritoneum. On removing the intestines the cæcum was found greatly congested and thickened, and the cellular tissue around in a state of suppuration, but it contained no accumulation within it, which I rather expected to find. The portion from which the appendix was given off was in a semi-gangrenous state, and the appendix itself was quite sloughing and rotten, and, on pressing it between my fingers, a hard substance fell out from the free end, which was ulcerated through. This substance was hard, smooth, slightly oval, and resembled a small plum or cherry-stone, and, as the boy was known to have been eating cherries previous to his illness, it was at first thought it might be a fruit-stone which had lodged in the appendix and given rise to the peritonitis from which he died.

Subsequently I mentioned the case to Sir William Jenner, and he told me that he had met with several cases of perforation of the appendix from so-called cherry or date stones, but that he believed they were not fruit stones at all, but calculi or concretions which were formed by small particles of fæcal matter finding their way into the appendix, and becoming impacted and hardened in the free end; that from time to time particles pass in this way and become deposited on each other, and a sort of calculus is thus formed which increases in size, till at last it sets up irritation and ulcerates through. Sir William Jenner (who has kindly permitted me to use his explanation) considers that the formation of these calculi is due to a malposition of the appendix, where, instead of being directed upwards and inwards, as it is normally, it is, owing to its length and the attachment of its mesentery, bent at an angle whereby particles of excreta can more easily slip into it, and, having passed in, are prevented returning. We made a section of the substance I had taken from the boy's bowel, and found it composed of concentric layers, and the centre softer than the outer surface, containing apparently a nucleus of fæcal matter, and leaving no doubt that it was one of these calculi.

Dr. Wilks in his "Pathological Anatomy," refers to the formation of these calculi in the appendix cæci, and states that they are formed by a morbid secretion from the glands of the mucous membrane lining its cavity combined with phosphate of lime; that they have a disposition to ulcerate their way through, and thus give rise to peritonitis. Dr. Wilks states that he has never found a fruit stone lodged in the appendix, though he has found smaller substances, such as a grain of shot and a pin; and believes that the stories of the cherry- or date-stones being found in the appendix are mere fables, and that they are nothing but these calculi. The formation of these calculi appears therefore to be due to a malposition of the appendix, as Sir William Jenner explains, or to some morbid process within its cavity. The appendix being closed at one end, and containing glands which, like the solitary intestinal, are known to become ulcerated in typhoid fever, must be liable to morbid secretions, which being retained and confined within its cavity, may form into concretions, and these, acting like foreign bodies, set up irritation and ulcerate through, causing peritonitis and death. It is probable that many of the cases of cæcitis which recover are due primarily to some irritation or mischief in the appendix, which appears to be more prone to morbid changes than the cæcum is, as in most of the cases which prove fatal the appendix is found to be affected rather than the cæcum itself.

Grosvenor-street, W.

CEREBRAL TUMOUR, PRODUCING MENTAL SYMPTOMS.

By ERNEST FIELD, M.B.,

PHYSICIAN TO THE EASTERN DISPENSARY, BATH; FORMERLY RESIDENT CLINICAL ASSISTANT, ST. LUKE'S HOSPITAL FOR LUNATICS.

THE following case is of interest, from the fact that the only prominent symptoms at the commencement of the patient's illness were of a psychological nature.

G. S——, aged forty-nine, was admitted into St. Luke's Hospital for Lunatics on October 13th, 1874. No better description can be given of his mental condition at this time than by reproducing the facts indicated in his medical certificate as showing him to be of unsound mind. They were as follows:—

"Incoherent; imagines he is not in his own house; thinks he has been working hard when he has done nothing of the kind; believes he is some other person; gets out of bed, and says he wants to go home; does not get up usually unless pressed to do so; says people are in the room, and others have visited him whom he has not seen; fancies he is leading a gipsy life; loss of memory; semi-comatose." These symptoms had been present for several weeks before his admission.

With regard to bodily condition, he complained of slight headache, and appeared somewhat weak; the left leg seemed a little wasted when compared with the right, but the man could walk very fairly. Beyond this there was nothing very noticeable about him. A suspicion was at first entertained that his might turn out to be a case of general paralysis, but this idea was given up some time before his death.

Gradually he lost power in his left side and became hemiplegic; lay in bed for days in a lethargic condition, with no pains, and expressing himself as quite comfortable. His mental condition remained much as before; it certainly was no worse. From time to time he would become quite insensible, breathe stertorously, and be to all appearance in a dying state; some hours afterwards, however, he would rouse up and take food. Finally, on Nov. 23rd he had one of these attacks, but on this occasion attended with squinting and unequal pupils; and after a few hours he died.

Necropsy. — A cancerous tumour of the size of a pigeon's egg was found on the right side at the base of the brain, close behind the fissure of Sylvius, pressing extensively on all the parts around, and causing commencing absorption of the petrous portion of the temporal bone.

It will be noticed that during the progress of this case there was no sickness, and but slight pain in the head; also there was no meningitis on the left side nor effusion into the ventricles, thus negativing the statement made by Professor Niemeyer in his text-book, that mental symptoms are absent in cases of cerebral tumour, unless one of these conditions is present or the tumour is bilateral.

The importance of systematic examination of the brain in persons dying "insane" is obvious, as well as the necessity for careful investigation before a patient is relegated to a lunatic asylum simply because his mental condition is becoming disturbed; for otherwise, as in the present instance,

a person may be branded as a lunatic who is merely suffering from the mechanical effects of a growth which happens to have selected the cranium rather than some other cavity or viscus for its development. If the symptoms resulting should be of such a nature as to make proper treatment of the patient impossible or very difficult anywhere but in an asylum, no doubt the best course may be to send him there, even though the real nature of the disease be known. But it will be evident that such a case as G. S—— could with perfect ease and propriety have been treated at home, had his family wished to be spared the distress of believing that one of their number had gone "out of his mind" and had died in a lunatic asylum.

Bath.

CASE OF

CURE OF HYDROCELE BY THE SPONTANEOUS RUPTURE OF THE SAC INTO THE SURROUNDING CELLULAR TISSUE.

By NELSON S. FOSTER, M.B.

T. H——, aged fifty-eight, a powerful man, in robust health, by occupation a roadmaker, suffered from a hydrocele of the left tunica vaginalis for seven years. The origin he attributes to a kick from a cow, which laid him up for a few days at the time of its occurrence. The treatment during that period had been palliative, the tumour being tapped more than a dozen times, and a large amount of fluid drawn off each time, giving temporary relief. After the last operation the sac refilled as usual, but became more distended, owing to the patient putting off a visit, not wishing it to be punctured during the cold weather.

He went about in this manner for five months, the hydrocele attaining the size of a large cocoa-nut, his only trouble being its bulk; when, on the night of Feb. 15th, a few minutes after retiring to rest, he was suddenly seized with a violent and excruciating pain about the genitals, which he describes as shooting across the parts and throughout the body, lasting about five minutes, leaving him sick and faint, then followed by pain less acute for half an hour, when it gradually ceased. On looking at the seat of pain, patient was surprised to see the penis swollen to three times its natural size.

On coming to me the next morning I found him perfectly free from pain. On examination the distended hydrocele had disappeared, the tunica vaginalis containing but a very small quantity of fluid; the penis retracted half its length; the glans natural in appearance, surrounded by the prepuce, which was dark-coloured and swollen, the lower part including also some of the adjacent skin and subcutaneous tissue, pendulous, and about the size of a hen's egg, infiltrated with fluid, fluctuating on palpation, and with the parts around tender on pressure and œdematous, but with no obstruction to the urinary passage.

On pricking the most dependent parts, thin serum oozed out and dribbled from the wounds. In a few days the parts gradually regained their usual state, and nine months afterwards I failed to detect any deviation from a perfectly normal condition; the patient was quite well, and never experienced any symptom of the disease returning.

Here, it would appear, the spontaneous rupture occasioned sufficient inflammatory action to cause adhesion of the interior, and permanent obliteration of the sac.

Bicester, Oxon.

SMALL-POX IN DUBLIN.—The deaths from small-pox in this city for the three months ending 29th November amounted to 55. The disease, however, has disappeared from the other large towns in Ireland.

A LADY lately living at Hounslow has, amongst other legacies, left £100 to Moorfields Eye Hospital, and the remainder of her property, some £10,000, towards the erection of a hospital for Hounslow and its neighbourhood; and by her will desired that her medical attendant, Dr. Tyler Smith (Whitmarsh and Tyler Smith), should be the medical officer of the institution.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

ST. BARTHOLOMEW'S HOSPITAL.

THREE CASES OF CHRONIC MENINGITIS, FOLLOWING INJURY TO THE SKULL.

(Under the care of Dr. SOUTHEY.)

THE following is the third, and last, case of this interesting series. For the first case see p. 796, and for the second p. 834.

Esther S——, aged twelve, an anæmic, scrofulous, ill-nourished child, was admitted into Faith ward on March 4th, 1875. She had a vacant expression, with a knitted frontal frown. She lay curled up in bed, refused all blandishments, and pulled the bedclothes tightly round her whenever an attempt was made to examine her. She seemed deaf, would not answer questions, and was altogether morose. She walked into the ward, and on inquiry it came out that she had always been wayward and ill-tempered. About Christmas time (1874) she fell violently on the back of her head. No notice was taken of this, but some time afterwards she became dull of hearing and appeared deaf, although she sometimes undoubtedly heard what was said; she was thought to be shamming. There was great difficulty in getting her out of bed in a morning, indeed she generally had to be pulled out. Nine weeks before admission she was confined to her bed entirely, on account of constant headache, and of aching pain—supposed to be rheumatic—in the limbs and joints. She was capricious and restless, and often moaned or cried out during the night, or when left alone. Her bowels were constipated. Ever after the fall she was, her mother alleged, an altered child, though little notice was taken of the fall at the time.

On admission, the temperature was normal; pulse 96, irregular and feeble; respiration 20. The heart's action was irregular and slightly intermittent; the impulse was normal in situation, and there was no increase of præcordial dulness. There was good resonance over both lungs; the left supra- and infra-clavicular regions were rather flat, and the breath-sounds were feeble there. There was no evidence of any abdominal mischief. The lymphatic glands were everywhere natural to the touch. The urine was normal in quantity and character, but was chiefly passed in bed.

Except that she put out her tongue when asked to do so, there was scarcely any intelligent response to questions. At times she was very troublesome, and swore and made a great noise. The pupils were rather dilated, but there was no sign of paralysis of any of the ocular muscles. No ophthalmoscopic examination could be made, but it was evident from observations she occasionally made that she could see.

She was always fed with a spoon; on some days she would take a fair amount of nourishment and would be more awake, on other days she was so drowsy that she could not be got to swallow; she would even go to sleep with her mouth full of food, and had to be well shaken before she could be roused to masticate the food which perhaps was put into her mouth half an hour previously.

On March 12th she recognised her mother, and her face was flushed with excitement at the visit. Temperature 101·2°; pulse 84. The bowels had not been open for three days. She had vomited only once since admission. The eyelids were half closed, and she groaned and occasionally screamed out.

On the 16th she stared about wildly, picked her nose, rubbed her forehead, pulled out her eyelashes, and moaned whenever she was disturbed. Pulse irregular, 108 to 120. After this she became gradually feebler and more soporous, and for the last few days of her life had to be fed by enemata. She died on March 21st, seventeen days after admission, or three months from the commencement of the symptoms.

At first a mixture containing ten grains of chloral hydrate and of bromide of potassium was given every six hours, but this was discontinued after the second day, after which the treatment became purely expectant.

Autopsy (March 22nd).—The pia mater and arachnoid were highly injected. There was some flattening of the convolutions from increase of the intra-ventricular fluid, four or five ounces of which escaped at the infundibulum just behind the optic commissure when the brain was removed. There was no appearance of effused lymph at the base of the brain, the substance of which was everywhere sound and healthy-looking. No tubercle was discoverable in the pia mater or fine vessels. The grey substance was, perhaps, rather pinker than natural, and a tiny blood-clot, the size of a pin's head, was found in the centre of the pons Varolii. The olfactory bulbs were very thin. The other organs of the body were wasted, but otherwise healthy.

Remarks.—It would seem that in this case, too, some false membrane or adhesion prevented the free circulation of the subarachnoid fluid, and led to dropsical distension of the ventricles and consequent pressure upon the brain-substance. The alleged fall or injury may or may not have been the starting-point of subsequent changes. It was unattended by serious concussion, and was passed over as a trifling circumstance. The original small intellectual endowment made it difficult to fix the exact date of the perverted cerebral functions.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

CASE OF PARALYSIS WITH WASTING OF ONE LOWER EXTREMITY.

(Under the care of Dr. BUZZARD.)

WE saw a few weeks ago the patient whose case is here described, for notes of which we are indebted to Mr. Broster, resident medical officer. There are many points of interest in the case, especially in reference to the question of the causation and treatment of perineuritis.

Agnes P——, aged thirty-six, the mother of seven children, who had never miscarried, applied at the hospital on April 30th, 1879, on account of loss of power and wasting of the right lower extremity. She had never been strong, and about five years ago suffered from a very severe attack of neuralgia of the left side of the face, which lasted five months. During the attack she lost the sense of smell, and for two years could not discern even very strong odours. In her various pregnancies the right leg always (with the exception of the last occasion) became swollen, and required an elastic bandage. After her confinements she had felt pains shooting up from the right ankle into the knee. The pain was very severe, preventing sound rest. It usually began on the second day of confinement, and lasted ten or twelve days. In October, 1878, she lost her child, and about this time felt a pain in the right knee, of a "jumping" character, shooting up the inside of the thigh. She did not know of any cause for the pain. It got worse from day to day, causing great difficulty in going up stairs. She did not notice any swelling of the knee or leg. Rest gave great relief. The pain lasted about three weeks, and was followed by a feeling of numbness. In February this year she lost much rest in consequence of having to nurse a sick child, and then felt the old pain return in the right knee and thigh, the limb always feeling very cold. Since that time the pain has got much worse, extending up the thigh to the bottom of the back, so that she has been scarcely able to move. In March she felt that the right leg was growing weak, and that she could only move it with difficulty. She noticed also that the right knee became swollen. When she was taken to the hospital she was unable to stand by herself.

The patient was a stout healthy-looking woman with a somewhat anxious expression of face. There was very marked wasting of the muscles in front of the thigh, and loss of power in the leg, causing the foot to drop. The knee could not be lifted, and there was no power of adduction. Some tenderness was complained of on percussion over the sacrum; there appeared to be slight synovitis of the knee-joint. The patellar tendon-reflex was absent on the right side, normal on the left, and there was no reflex on tickling the sole of the right foot. Electrical examination showed that the irritability of the muscles of the thigh and tibialis anticus group was entirely lost to the induced current. The strongest currents were only felt as "something wet" over the skin of this extremity. On the back of this thigh a pinch could be felt, though not so keenly as on the left limb. In front of the thigh it was only recognised as touch. There was nothing whatever wrong with the left lower extremity. There was no history of, or reason to suspect, syphilis. Five grains of iodide of potassium were ordered to be taken three times a day. In three or four days she felt much relief from pain, and within a fortnight was able to move her foot slightly in bed. On June 29th it was noted that during the last few days she had suffered from pain shooting down from the knee to the ankle. There was no alteration in the electric irritability of the muscles from what had been previously noted, but strong currents now caused a slight feeling of tingling. The power of adduction had improved. On July 1st the dose of iodide was increased to ten grains, and on July 16th to twenty grains, three times daily. On July 7th she found that she could limp across the room by herself. On August 16th she said that occasionally she got a twitching along the inner side of the right thigh, and aching pain (especially in wet weather) all down the right lower limb. There were no sharp, shooting pains. She was now able to stand and walk without help of any kind, and could manage to get round Queen-square. A pinch on the front and inner part of the thigh could now be felt, but not so keenly as in other parts of the body; far better, however, than when she was admitted. She recognised a touch, too, but "as though through several layers of calico." Soon after admission she had pinned some needlework on to her knee instead of her dress, not recognising that the pin had gone through her skin. There was still great loss of power in the anterior tibial muscles, so that voluntary dorsal flexion of the foot was impossible. The right thigh was an inch and a half, the right calf half an inch smaller than the left. She was now discharged, the treatment being continued; and when seen on Oct. 8th she could walk a mile or two, the limb had increased in size, and she was quite free from pain. The patellar tendon-reflex was still absent.

Dr. Buzzard remarked that the symptoms of the case pointed to a perineuritis of nerves of the right lower extremity. The pain between the sacrum and the limb, and the fact that both the anterior crural and the sciatic district were affected, seemed to show that the seat of inflammation was probably high up, but whether in the cavity of the pelvis or in the cauda equina could not be decided with certainty. From the history, it looked as though the nerves might have been exposed to undue pressure from the fœtus in utero, but there was probably also a proneness to inflammation of nerve-sheaths, for the woman had suffered previously from very severe facial neuralgia. The great wasting of the limb and the absence of patellar tendon-reflex might at first appear to indicate a spinal lesion, but the fact that the mobility and sensibility were equally affected in this one limb only was sufficient, he thought, to disprove this. As regards the patellar tendon-reflex, a lesion in the nerve-trunk, sufficiently severe to cause great muscular atrophy and cutaneous anæsthesia, would be quite as likely to occasion its disappearance as a lesion of the grey matter of the cord. The electrical reaction, too, might equally depend upon a lesion of the nerve-sheath, which practically cut the nerve off from its nutritive centre in the cord. The treatment adopted was directed to a supposed rheumatic condition. He did not think that the disease was of syphilitic origin.

HEREFORD GENERAL INFIRMARY.

CASE OF HIP DISEASE, WITH SUDDEN DEATH FROM CARDIAC EMBOLISM.

(Under the care of Mr. TURNER.)

FOR the notes of this interesting case we are indebted to Mr. Charles J. Devis, house-surgeon.

Charles H——, aged fourteen, a farmer's boy, was admitted on Nov. 21st, 1878. His illness began eight months before, when he complained of an aching pain in the right hip. He continued to work, but always with lameness. He grew worse during the two months prior to admission, and was obliged finally to leave off work.

On admission he presented the symptoms and signs of synovitis of the right hip-joint—viz., flattening of the buttock, loss of the gluteal fold, flexion of the joint, and

great pain on movement of the limb. There were no rigors, and no great variation of the daily temperature. The limb was extended, and Liston's long splint was applied. Iron and cod-liver oil were given internally.

On Jan 13th there was much tenderness and pain in the region of the hip-joint, aggravated at night, with starting of the limb when going to sleep. There was no fulness in the front of the thigh where the tenderness was greatest.

On Feb. 21st the apparatus was removed. There was much fulness over hip-joint in front of thigh, the fold of the groin being lost. There was no pain on pressing trochanters, and very little on raising the limb. The limb was very stiff at both knee and hip, and there was great œdema of whole limb. The limb was raised on a pillow and enveloped in a flannel bandage.

On March 1st he was better, there being very little pain on either pressure or movement. Ordered to sit up a short time each day. On the 3rd he was obliged to return to bed on account of increase of pain and œdema of limb, which latter much resembled that of phlegmasia dolens. Extension was reapplied. On the 5th fluctuation was detected below the great trochanter over an area about two inches by one inch in extent.

On April 12th the pain was less; fluctuation not increased; œdema as great as before. Feet of bed raised on blocks, and the limb well raised on pillows.

On May 15th the œdema of limb was much less, but still persisting; the tissues were brawny and hard; there was no tenderness in the region of the femoral vein or lymphatics; the knee, to which passive motion had been applied, was a little more flexible. An aspirator needle was introduced into the abscess, the contents of which were found to be inspissated pus too thick to pass through the needle.

On June 6th complete anæsthesia was produced by ether given in Clover's inhaler, six drachms being the total quantity used. The knee was fully flexed and the hip partially so, the adhesions readily breaking down. No unusual symptom occurred during the day. Vomiting began half an hour after the operation, and continued until evening (about five hours). The patient slept well and ate his breakfast heartily at 7 o'clock on the following morning. At 8.35 A.M. he told the nurse that he had a pain in his left side, to which she replied that she would give him a fomentation until she could fetch the house-surgeon. Whilst preparing the fomentation the nurse looked up and saw the lad looking very ill, but without any breathlessness, and at once summoned the house-surgeon, who arrived at the bedside within five minutes of the first complaint of pain, only to find him at the last gasp.

Necropsy, forty-eight hours after death.—Hypostatic congestion and rigor mortis well marked; body well nourished; right hip almost completely anchylosed, only admitting of slight flexion; much solid œdema of right lower limb. Thorax: Venous trunks distended with blood; pericardium fully occupied by heart; right auricle much distended, ventricle to a less degree. Lungs pale, with slight hypostatic congestion. On cutting through the pulmonary artery, it was seen to contain a colourless fibrinous clot of some consistence. Heart: Right auricle full of blood-clot, which extended through the right ventricle into the pulmonary artery to its secondary divisions; centre of clot yellow, firm, and strongly adherent to the auricular appendix; the majority of the clot softer and more friable, partly colourless and partly coloured. Left heart empty; ventricle firmly contracted. Abdominal organs healthy, with the exception of a great amount of congestion, most marked in the kidneys. The disease of the hip was found confined to the articulation, the surfaces of the femur and acetabulum both being bare and rough; a large abscess directly communicating with the joint was found deeply situated among the adductor muscles. On examination of the femoral vein, this vessel was found converted into a tough fibrous cord, quite impermeable for an inch and a half in extent, the part of the vein involved being in the apex of Scarpa's triangle. On laying open the vein a firm tough clot closely united to the inner coat of the vessel was found extending upwards for half an inch, and surmounting this was some soft recent clot, which readily broke off. The remainder of the vessel, as well as the external and common iliac, was healthy and permeable.

Remarks.—The question that naturally arises in this case is, how much of the fatal termination was due to the disturbance of the blood-clot in the femoral vein by the manipulation given to the limb? And, depending on that, what was the sequence of events that took place in the vascular system? It would appear that on the flexion of the knee and hip joints a portion of clot was broken off and carried into the circulation. The lodgment of this embolus in the auricular appendix gave rise to little or no disturbance, but on this was built an immense thrombus, almost filling the auricle, and extending through the ventricle into the pulmonary artery for some distance. Under these circumstances, if such they be, how is such a sudden death to be explained? Not by an extra exertion on the part of the patient, for he was at the time lying quiet in bed, and had not felt any inconvenience when having his breakfast, although occasionally reaching over to his locker.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Vaccinia gangrenosa.—Carcinoma of Breast, preceded by so-called Eczema of the Nipple and Areola.—Eczema of the Nipple and Cancer of the Breast.

THE ordinary meeting of this Society was held on the 9th inst., Mr. J. E. Erichsen, F.R.S., President, in the chair. Two communications dealing with the subject of eczema of the nipple and mammary cancer were read. The first was by Mr. Henry Morris, and comprised details of two cases, in which the clinical features differed in some measure from those related by Sir James Paget; the second was a paper by Dr. Thin, entering in full detail into the minute anatomy of the "eczematous" condition. Dr. Thin's conclusions were that there are two varieties of mammary cancer, the parenchymatous and the duct-cancer; that the latter form was that which was sometimes preceded by "eczema of the nipple"; and, further, that all so-called adenomata of the breast belonged also to the category of this variety of cancer. Unfortunately time did not permit of discussion upon these papers, but it was resolved to adjourn the discussion until the next meeting of the Society.

Before these papers were read Mr. HUTCHINSON described a case of Vaccinia gangrenosa, and exhibited the body of the infant, who had been vaccinated three months before death from the arm of a healthy child. Three other children vaccinated at the same time from the same source took no hurt. On the eighth day after vaccination a papular and vesicular rash appeared over the trunk, which rapidly assumed a sloughing character. The eruption was at first taken for small-pox, and when death took place a fortnight later an inquest was held on the case, for it was then thought to be syphilis. But Mr. Hutchinson pointed out that its evolution as well as its characters were not those of syphilitic infection, and he considered it to be a case of true vaccinia passing on to a gangrenous condition,—a condition he had sometimes observed to take place in varicella. The vaccine marks in the arm were natural.

The following is an abstract of a paper on two cases of Carcinoma of the Breast preceded by so-called Eczema of the Nipple and Areola, by Mr. HENRY MORRIS. The paper contains the clinical history and the description of the post-mortem examination of two cases in which eczema of the nipple and areola was followed by cancer of the breast, and subsequently by diffuse secondary deposits in the liver and other parts of the body. Hitherto no complete report of any similar cases has been published, although it is now five years since Sir James Paget first pointed out the connexion between the two diseases. Both the cases now reported differ in some important features from Sir James Paget's description—viz., in the extent of the so-called eczematous inflammation; in the length of time between the commencement of the eczema and the supervention of the cancer; in the continuity of morbid changes between the seat of the eczema and the cancerous mammary nodules; and in the age of the persons—always women—affected. The rarity of the cases in which cancer of the breast has supervened upon eczema of the nipple and areola is inferred from the fact that out of 305 cases of cancer or supposed

cancer of the breast which were treated by the author in the cancer out-patient department of the Middlesex Hospital up to the end of 1878, these are the only two instances in which the association between the two diseases has existed.

A paper on "Eczema of the Nipple and Cancer of the Breast, an inquiry into the nature and mutual relations of the morbid conditions which have been associated under these names," by Dr. GEORGE THIN, was then read. The paper deals with the condition of the skin of the areola and nipple in a case operated on by Mr. Henry Morris, and in another operated on by Mr. George Lawson. It further deals with the kind of cancerous tumour found in these two cases, and in another breast given to the author by Mr. Knowsley Thornton. A clinical history of Mr. Morris's case is now before the Society. Mr. Lawson's case was that of a woman aged fifty-two, in whom the affection diagnosed and treated as eczema had existed four years. The duration of a perceptible tumour in the breast is uncertain, but a year before the operation none could be felt. In Mr. Thornton's case a breast tumour had existed three years, and had been preceded for a year by a discharge from the nipple. The gland was atrophied, and the skin over it puckered. The nipple was enlarged and covered with wart-like excrescences. All the three tumours were of the kind which, when small, localised, chronic, and without concomitant affection of the lymphatic glands, have been described by English and some German pathologists as adenoid or adenomas (the cases with a more malignant history clinically being confounded with the other or scirrhus type of mammary cancer). Similar tumours have been described by Waldeyer as examples of what he calls *Fibro-carcinoma cysticum mammæ*, by Labbé and Coyne as *Epithelioma intracanaliculaire*, and by Cornil and Ranvier as *Carcinome villeux*. The author endeavours to show that all the cases of eczema of the nipple with cancer of the breast which have been previously recorded also belong to this category of tumour, and that the association with the more common or scirrhus variety of cancer has not yet been observed. The cancer which is associated with the diseased areola and nipple is a cancer which takes its origin by a cell-formation in the lactiferous ducts. It extends by descending into the smaller ducts, and also by the continuous growth of columns of cells which get into the connective tissue by breaking through the membrana propria both of the larger and smaller ducts. The forms assumed by the growth depend on the situation. In the cutis and in some parts of the breast the cell-columns resemble those of scirrhus, and might be indistinguishable from them. In other parts, especially in the deeper parts of the breast, the tendency is to the formation of round columns and spherical masses of cells. The central cells of these columns sometimes break down and tubes are formed, and when this is the exclusive formation the appearance described as adenoma is seen. These columns sometimes combine to form large spherical masses, the central cells of which liquefy, cystic cavities being then produced. The external layer of cells, both of the small tubes and the large cavities, have a tendency to assume the columnar form, and sometimes the cells are typical examples of columnar epithelium. This columnar epithelium is the stamp of the origin in the columnar epithelium of the ducts, and, with the formation of circular cell-groups and the comparative absence of alveoli, affords a basis for the distinction of this duct-cancer from the scirrhus type or parenchymatous cancer. The author believes that all breast cancers can be referred to one or other of these forms, according as the original point of departure has been from the epithelium of the ducts, or from the secreting epithelium of the acini, and that the nomenclature of breast tumours would be simplified by the exclusive use of some such terms as duct-cancer and parenchymatous cancer. The author is not able to agree with those pathologists who make the presence or absence of a membrana propria the criterion of a duct or parenchymatous cancer (adenoma or scirrhus). In duct-cancer he has found that newly formed cell-masses may have no membrana propria; whilst large masses of secondary formation may have it highly developed. He has found it as a product of new growth around some cancerous masses, whilst other masses near them showed no evidence of it. It is found around cell-masses which do not seem to have been growing rapidly. Around some cell-masses in this form of cancer he has found a considerable thickness of a layer of very minute fibres which have the optical and staining characteristics of fine elastic fibres. The layer is between the membrana propria and the fibrillated connective tissue, and is analogous to the layer of elastic fibres described by Henle as surrounding the large lactiferous ducts, but in extreme instances much exceeds it in extent. Its formation around masses of morbid epithelium in duct-cancer is regarded by the author as analogous to the formation of the normal elastic layer around the healthy epithelium of the large ducts. The changes in the skin are confined to the epidermis, and the papillary layer of the cutis and the diseased area is sharply limited towards the healthy tissues; in one case the boundary being formed by a broad descending portion of epidermis, and in the other by a narrow groove on the superficial side of the rete mucosum. In the diseased epidermis many cells of the rete mucosum had disappeared, leaving holes in their place. Many of the remaining cells showed signs of disintegration both in the nucleus and cell-substance. The rete mucosum as a tissue was broken up into masses, between which the connexion was sometimes very slight, and in some places it only existed as a ragged remnant. In the papillary layer the bundles of connective tissue had to a large extent become disintegrated, and the space between the rete mucosum and the pars reticularis was filled with a granular substance thickly infiltrated with exudation cells. The deeper parts of the skin were healthy. Similar changes were found on the surface of the nipple, on which there still existed a ragged epithelium containing many exndation cells. These appearances show that the surface of the skin has been subjected to the action of a destructive influence radiating from the nipple, which prevented by its continuous action the restitution of the integrity of the rete mucosum and the bundles of the papillary layer, whilst the destructive effect was not sufficient to produce actual ulceration. The destruction of the deeper cells of the rete mucosum and of the connective tissue of the pars papillaris, shows that the affection is not an eczema. There was no cancerous epithelium in the diseased skin area. The author believes that the evidence points to a slowly advancing cancerous change near the mouth of the lactiferous ducts, which at a very early stage leads to irritative effects on the superficial tissues of the nipple and surrounding skin, and eventually penetrates into the substance of the mammary gland.

Dr. THIN showed diagrams illustrating a peculiar case described in the New York *Archives of Dermatology* as a case of Scleroderma, but which he regarded as a severe case of the affection of the skin which had in London been found associated with cancer of the breast. The case is reported by Dr. Foster, of New York. A single woman, aged thirty-six, noticed a fissure of the left nipple in June, 1875, and about the same time a small swelling under the skin of the breast. The nipple continuing tender, and exuding a drop or two of blood when touched, the patient consulted Dr. Hopkins, of Buffalo, who found the nipple swollen a little and rather sensitive, with an abrasion covering its top. A film would form over it for a day or two, and then come off, leaving a raw surface. At this time the breast was normal in all other respects save a small lump about the size of a chesnut, which seemed imbedded in or attached to the gland at its inner border. After treatment for fourteen months by stimulating and irritating applications, the nipple was still symmetrical, but much enlarged. It had not regained its epithelium at the top, and had lost it in several places around its base. At one part of the base was a fissure, extending quite into the nipple. All these surfaces had a rather dry look; some pus was secreted, but little, and that not offensive. Several months later, two New York surgeons diagnosed the case as the *squirrhe en cuirasse* of Velpeau. An infiltration began to spread to the neighbouring skin, and within a few months more the disease affected the skin of both breasts, and that over the sternum and the whole left half of the chest in front, creeping around to the scapula and the greater portion of the left arm and forearm. The proper substance of the left breast was at that time much shrunken, the nipple shortened and swollen, and surrounded by a groove of ulceration, discharging a thin, scanty fluid, which was at times offensive. A month or two later papular outgrowths were noted as existing over the surface of the left breast, which progressed until the entire left breast was covered with a highly vascular granular tissue, and the nipple of that breast had entirely disappeared. When the patient died, about two years from the first appearance of disease in the nipple, the induration had spread over almost the entire trunk and both arms. During the last month of life the site of the left breast was

occupied by an irregular fungating ulcerating mass, which had rather a scanty but highly offensive discharge. Dr. Thin agreed with the members of the American Dermatological Association, who did not regard the case as one of scleroderma, but he could not agree with those who considered the induration of the skin as being directly caused by cancerous deposit—not thinking it possible that the whole trunk and both arms could be affected with cancer without ulceration. The ulceration of the left breast he considered to be due to cancer; and the infiltration of the skin, he suggested, was due, as already stated, to an infiltration of a similar kind to that which had been described in London as eczema.

The usual time for adjournment having arrived, it was resolved, on the motion of Mr. BUTLIN, seconded by Dr. MOORE, to adjourn any discussion upon these papers until the next meeting.

Dr. WHEELER BROWN showed a Dog suffering from Chorea.

MEDICAL SOCIETY OF LONDON.

Ovariotomy following Incision and long Drainage.—Treatment of Affections of the Female Urethra and Bladder.

AT the meeting on December 1st, Dr. J. Cockle, President, in the chair, Dr. Lichtenberg exhibited a Splint for Excision of the Knee-joint in cases treated antiseptically. It consists of three parts—the thigh, foot, and middle piece. The thigh and foot pieces are united by two strong iron arches, for the double purpose of securing strength and forming a cradle. The middle piece is attached by two screws to the thigh and foot piece, and can be removed for dressing.

Mr. KNOWSLEY THORNTON then read a paper on Ovariotomy following incision, long drainage, and supposed cure of ovarian tumour. The paper was a record of three cases of ovarian tumour, in which exploratory incision, followed by drainage of the cyst, with injections, had been employed for two of the cases, and injections for the third. All were supposed to be cases of cure of ovarian tumour without ovariotomy. In all re-growth took place, and the author of the paper eventually removed all successfully by ovariotomy. The periods between the first operations and the successful ovariotomies were respectively four years, three and a half years, and eleven years. All these operations were complicated by serious adhesions, and all the cases presented features of special interest, apart from those common to all. In some concluding remarks the author referred to the special features of interest as follows:—It is very remarkable that two of these cases should have survived such grave dangers as the sponge being left in and secondary hæmorrhage, after also escaping the almost equal dangers of tapping and drainage. The fact of a sponge being left in the peritoneum was by no means the solitary example of this accident in ovariotomy, but this was the first recorded case in which recovery had followed its removal. The author had twice before had hæmorrhage from slipping of a ligature, but neither case recovered, and among many similar cases he had heard of in only one was the patient's life saved, and in that case the hæmorrhage was discovered and stopped almost directly after the operation. He attributed recovery in his own case entirely to the antiseptic method, and he called attention to the striking difference in the rapidity of the recoveries in the two aseptic cases as compared with the putrid case, the grave accidents to which the former cases were exposed merely accentuating this difference. In all three cases the steady progress was much aided by regulating the temperature with the ice-water cap. The cases, taken together, teach two important lessons:—1. The thoroughly unsatisfactory nature of the so-called cure by tapping and drainage; a lesson which the pathology of ovarian tumours might teach without surgical experiment. 2. The important fact that cases which have been treated by this unscientific method may still be successfully dealt with by the major operation of ovariotomy, even though many years have elapsed since the supposed cure. Other points of interest were: the entire absence of adhesion between the cicatrix and parietes in case No. 1; the method of dealing with very firm adhesion to intestine; certain points as to antiseptic operation in presence of putrid sinus; the entire absence in Case 3 of any sign of the entire rupture of the linea alba, which had taken place at the time of the former operation; the danger of trusting to a single ligature, however small the pedicle; and the importance of not being hurried into opening the abdomen without the spray in a case of secondary hæmorrhage into peritoneum.—Mr. DORAN said that the reason why drainage was unsuccessful in these cases is because it is required to act contrary to the laws of gravity. The reason was well seen in the rapid evacuation and cure of abscesses connected with the urethra.—Dr. WILTSHIRE said these cases showed the folly of attempting to cure ovarian disease by tapping and drainage. He thought when the cyst-wall was too firmly adherent to the bowel for removal, that the epithelial layer of the cyst should be carefully dissected off. He knew of a case where fatal hæmorrhage occurred from a vessel in the pedicle being pierced by the sharp-pointed needle used in transfixion. In this case the pedicle had been tied in two halves, thus leaving the punctured vessel gaping. He agreed that many cases were now successfully treated by the aid of antiseptics which would not do without them.—Dr. HEYWOOD SMITH said the number of pregnancies in the cases was interesting. He agreed that in recurrent or secondary hemorrhage search should be made for the bleeding vessel.—Mr. REEVES considered it useless to try to cure ovarian disease by means of tapping and drainage. He had had one case of suppurating ovarian cyst, which adhered firmly to intestines and liver, and the peritoneal cavity was at one time full of pus. This was removed, and the peritoneal sac washed out with carbolic lotion, and in six weeks the patient left the hospital cured.—Mr. THORNTON, in reply, wished that all misfortunes in surgery could be brought before the profession. He agreed with Mr. Doran's remarks about drainage. The adhesions in these cases were merely secondary, and the pedicles were long and would not have presented any difficulty to primary ovariotomy. He thought the slipping of the ligature was due to the contraction of the muscular tissue of the pedicle. To prevent this the pedicle should be transfixed before ligation, for which he always used a sharp needle, spreading out the pedicle to prevent the possibility of puncturing a vessel. Many cases supposed to be cured by tapping and drainage are really only temporarily relieved.

Mr. REEVES read a paper on the Treatment of some Affections of the Female Urethra and Bladder, in which he drew attention to ulcers, fissures, and a granular condition of the urethra, and to those frequent cases of cystitis, not a few of which are accompanied by ulceration of the mucous lining of the bladder. After pointing out the unsatisfactory manner in which the various text-books deal with the subject, he drew attention to a urethral speculum which he had used for several years with most encouraging results, and by means of which he had been able to demonstrate most of the morbid conditions of the urethra and bladder. Prof. Simon, of Heidelberg, some months after Mr. Reeves had invented this instrument, published a description of a vulcanite dilator. An instrument for more perfectly syringing out and distending the bladder was exhibited, and illustrative cases quoted. Mr. Reeves concluded by insisting on the necessity of examining all cases thoroughly with this speculum, and then there would be fewer leaving hospitals uncured.

The Pathological Histology of the Spinal Cord.

THE meeting on the 8th inst. was devoted to a microscopical demonstration of diseases of the Spinal Cord, by Dr. Gowers. The President, Dr. Cockle, at the conclusion of Dr. Gowers' explanatory remarks, tendered the cordial thanks of the Society to him for his highly interesting, instructive, and extensive demonstration.

Dr. GOWERS gave an account of the various pathological changes illustrated by the sections under the microscope. The structure of the normal white columns and the gradual development of the changes which constitute 'sclerosis" were first described, together with the facts which indicate the existence of two forms of sclerosis; the one beginning by an overgrowth of the neuroglia and connective tissue, and random in distribution; the other beginning by wasting of the nerve elements and following lines of nerve function. The value of the latter in differentiating areas of functional distinctness was next considered, and illustrated by the

descending degeneration of hemiplegia in the anterior and lateral columns. Primary lateral sclerosis was illustrated by sections from a case of syphilitic disease of the brain, in which descending degeneration on one side was associated with a primary lateral sclerosis on the other, which had been revealed during life by double ankle clonus. The structure of the anterior cornua was described and the degenerative changes in progressive muscular atrophy, the complete disappearance of the motor nerve-cells in this disease being illustrated by sections from three cases. The associated degeneration in the lateral column and its probable significance were discussed. The speaker then considered the ascending degeneration in the posterior median columns which occurs when the posterior columns are extensively damaged; a series of sections being shown from a cord the lower extremity of which had been crushed by a fractured spine. Primary degeneration of the posterior median columns was illustrated by sections from the only two cases which have yet been described—one by M. Pierret, the other by the speaker. The lesions in locomotor ataxy were next considered, sections being shown from five cases, one being kindly lent by M. Pierret, presenting sclerosis of the root zones only. Other sections presented the extension of the degeneration to the posterior vesicular columns and to the anterior cornua, explaining the muscular wasting sometimes observed late in the disease. The sections illustrating disseminated and local myelitis, acute and chronic, were then described; an instance of the latter being presented by a "railway cord," from a case in which the patient, quite well for twenty-four hours after the accident, gradually became paraplegic, and died six weeks later; disseminated lesions were found in both grey and white substance. The changes in functional diseases of the cord were exemplified by sections from chorea of the dog, and from hydrophobia; the former presenting diffuse swelling with vacuolation of the nerve-cells, and both showing extensive leucocytal infiltration. Growths in the cord were illustrated by sections from four cases, in one of which the tumour was extending up the central canal; and another, a syphiloma, was situated in the posterior column. A case of hæmorrhage in the cord presented an enormous extravasation in the cervical region, which had worked its way down the posterior cornua to the middle of the lumbar enlargement. Finally, some congenital abnormalities were illustrated and described, including the changes in spina bifida, and a fatty tumour of the cord containing striated muscular fibres.

OBSTETRICAL SOCIETY OF LONDON.

Methods of Transfusion.

AT the meeting of the Obstetrical Society, held on Wednesday, the 3rd inst., a report of an Experimental Inquiry into the Methods of Transfusion, by E. A. SCHAFER, F.R.S., was read. The first part of the inquiry was to ascertain whether any other fluid, such as milk, could with advantage be substituted for blood in transfusion. Numerous experiments were made on this point, with the co-operation of Mr. G. F. Dowdeswell. It was found that rabbits generally died within twenty-four hours if ordinary milk was injected into their veins, even in small quantities. The blood-corpuscles became disorganised, and the blood swarmed with bacteria. Milk which had just been boiled, or which had been drawn direct from the cow's teat into a previously superheated vessel was innocuous. Dogs and cats resisted the action of septic organisms in milk. In animals reduced by bleeding to an almost lifeless condition, the injection of milk into the bloodvessels was sometimes, but not always, followed by temporary rise of blood-pressure, but there was never any permanently beneficial effect. Such animals always died. These results are confirmatory of those of Howe and Dupuy in America. It was next explained that no fluid lacking hæmoglobin could be expected to be of benefit in cases of acute anæmia. The question next to be determined was whether the blood of any other animal could be used for transfusion in cases of depletion of the human subject. This question is answered in the negative by the results of the microscopical examination of mixtures of human blood with the blood of the lower animals. As Landois and others have already shown, sooner or later the red blood-corpuscles of one or both kinds of blood become dissolved. Moreover, the white blood-corpuscles cease their amœboid movements, and are soon killed. Sometimes the solution of the colouring matter of the blood-corpuscles occurred in a few minutes, sometimes not for some hours. At any rate the action of the blood or serum of the lower animals is by these experiments proved to be an actual poison to the human blood-corpuscles, and would probably be the same to the living cells of the tissues. Moreover, it was found that dog's blood could not be transfused to any great extent into a cat in place of the animal's own blood, or lamb's blood into a dog, without fatal consequences. The result of these experiments, then, is to prove that *in man only human blood can be used with advantage for transfusion*. It was next sought to determine the best method in which transfusion can be effected, and especially if it were possible to transfuse arterial blood into an artery towards the heart. The great advantage which such a method must present is pointed out by Blundell, who, in one passage in his "Researches," gives as a reason for recommending such a course that the circulation through the coronary arteries is at once renewed, and the heart thereby strengthened. Numerous experiments were accordingly made upon dogs and cats with the object of testing the result of such a mode of transfusion and its applicability to the human subject. In these experiments an animal was first depleted of blood until arterial pressure had sunk almost to zero, and one of its arteries (femoral) was connected by glass cannulæ and simple indiarubber tube filled with carbonate of soda solution, with the artery of another healthy animal. The connexion was in every case followed by a recovery of the depleted animal almost magical in its rapidity and extent. It was found that a flow of one minute's duration was generally enough to restore the patient, and further that there was little or no danger of the flow of blood from the donor being excessive, for the pressure in the arterial system of the recipient speedily became equal to that in the donor. Out of many experiments of this nature in only one was the ultimate result unsuccessful, death occurring on the seventh day from secondary hæmorrhage. But in this case the animal was unhealthy (skin disease) at the time of the operation. It was pointed out that the ordinary risks of transfusion, such as the introduction of air or clots into the veins, and the supervention of phlebitis, are absent from this operation, and that it has further the advantage that no apparatus is required beyond a simple tube, and that the blood is at once introduced into the situation where it is most needed—viz., the arterial system. The difficulties that are presented by the use of arteries for transfusion were not lost sight of, but it was insisted on that the very general fear of dealing with arteries is in great measure unfounded; especially if a minor artery is employed. In the human subject it is recommended that the dorsal artery of the foot should be used both to yield the blood and to receive it. The exact method in which the operation is to be performed was described, and the tubes and cannulæ recommended were exhibited. The details of the experiments on transfusion, and especially of transfusion from vein to vein, instead of from artery to artery, then followed. These showed that transfusion from vein to vein, through a simple indiarubber tube with glass terminal previously filled with carbonate of soda solution, was both easy and, except in extreme cases, in which the heart had almost ceased to beat, rapidly effectual. It was found that the intervention of an elastic pump, as in Aveling's apparatus, did not accelerate the flow, but in some cases stopped it by sucking in the wall of the vein, and was, moreover, liable to force clots into the patient's vein. And it was pointed out that there is no object in measuring the amount of blood which flows except by the effect produced upon the patient and donor. Finally, it was recommended, as the result of these experiments:—1. That fluids other than human blood should never be used for transfusion in cases of hæmorrhage. 2. That transfusion should always, if possible, be effected through a simple flexible tube with glass cannulæ. 3. That direct centripetal arterial transfusion should, if possible, be employed. 4. That failing any person willing to submit an artery to yield the blood, but ready to allow of the exposure of a vein, direct venous transfusion be employed. 5. If it is impossible to attempt either arterial or venous direct transfusion, immediate transfusion of either unwhipped or

whipped blood collected into a funnel and allowed to flow through an indiarubber tube and glass cannula into a vein can be tried, although with greater risk of the introduction of clots and of the germs of putrefactive bacteria into the vascular system of the patients.—The PRESIDENT expressed his sense of the great value of the report. At the same time he felt that there were great difficulties in carrying out direct transfusion, especially the arterial. The objection to opening an artery, and the state of general confusion of a household at the time transfusion was required, rendered it extremely difficult.—Dr. HICKS agreed that it was impossible in many cases to effect direct transfusion, and asked if saline solutions (such as of phosphate of soda) used to prevent the blood to be transfused from coagulating, rendered people more liable to hæmorrhage after its use.—Dr. CHAMPNEYS stated that the effect of transfusion of lamb's blood in persons suffering from exhausting disease at Dresden were blushing, dyspnœa, hæmaturia, and, in some cases, urticaria. No fatal cases occurred.—Dr. AVELING objected to arterial transfusion, preferred venous, and advocated elevation of the limbs and buttocks, with lowering of the head.—Dr. CORY had transfused three times—twice with saline solution, both died; once by Roussel's apparatus, and the case recovered.—In reply, Mr. SCHAFER pointed out the danger from using defibrinated blood, acknowledged the difficulties of direct transfusion, and stated that the blood might be prevented from coagulating by mixing with it saline solutions, but the transfusion of such a mixture would prove fatal.

Reviews and Notices of Books.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Tom. XXVII. PESS—PIG. pp. 900. Paris: Baillière et Fils. 1879.

THE principal articles in this volume are the following:—"Pessary," by MM. Gallard and Leblond, in which the authors show that this instrument was known in remote ages, though it has only been methodically employed since the commencement of the present century. Several pages are devoted to illustrating the chief forms in use, and the mode in which they should be applied.

"Peste," by A. Proust, who gives a succinct but good account of it, including details of its most recent outbreaks near Mount Ararat in 1863, and the southern districts of Mesopotamia in 1876 and 1877, and which appear to be now happily extinct.

"Phagédénisme," by Alfred Fournier. This includes an account of venereal phagedenic ulcers, which, according to M. Fournier's own observations, appear to follow simple chancre exactly twice as frequently as true syphilitic chancre, and to be more frequent still as a tertiary affection. The various epiphenomena and complications are very fully given. We are glad to see that in the treatment he approves of moderate doses of mercury, though no doubt many of the more serious cases described by the older authors owed their origin in part to the abuse of this drug.

With the exception of two short articles on "Phosphorus," by E. Ory, and on "Phlegmon," by E. Le Dentu, the remaining 700 pages of this volume are occupied with the two interesting subjects of "Phthisie pulmonaire," and "Pied," the former by V. Hanot, the latter by Professor Delorme.

Dr. Hanot commences his account of Phthisis by a historical review of the subject from the time of Hippocrates downwards, the sections giving the views of Laennec, Cruveilhier, Lebert, Virchow, and Charcot being particularly well written. Dr. Hanot himself, whilst admitting the extreme complexity of the pathological anatomy of phthisis, describes the "tubercular granulation" or "miliary tubercle" of Laennec under the term "nodule tuberculeuse péribronchique" (Charcot), and takes his description of it from Charcot's account and drawings. The seat of the grey granulation he agrees with Charcot in believing to be peribronchial, and cites Rindfleisch's account of its commencing just at the point where the terminal bronchus is continuous with the alveolar spaces of the corresponding acinus. The softening and caseous degeneration of the tubercular masses are also given in accordance with Charcot's and Rindfleisch's views. The whole subject of the pathological anatomy of phthisis is given as completely as possible, and we do not know where we could refer our readers for a more lucid description. The diagnosis of acute phthisis is acknowledged to be extremely difficult, especially in relation to capillary bronchitis—for the first fortnight at least; but the presence of a feeble constitution, hereditary tendency, the antecedent occurrence of whooping-cough, measles, or typhoid fever, and the advent of diarrhœa, may aid in forming a diagnosis; after that period it is more easy, since capillary bronchitis generally proves fatal, and the diagnosis is supported by the intensity of the râles at the apex of the lung and the dulness in this region, as well as by enlargement of the spleen. In speaking of the etiology of phthisis, the controversy raised by the inoculation experiments of M. Villemin is entered into with much vigour, but the author is unable to arrive at any definite conclusions on the subject.

The article "Pied" commences with an account of the anatomy of this part, proceeding from without inwards, and terminating with the bones and ligaments. The physiology is necessarily limited, as it has been already considered under the term "Orthopædie" in an antecedent volume. The pathology of the foot is dealt with under the heads of Deformities, Sprains, Luxations, Fractures, Wounds, Tumours, Parasites, Amputations, and Resections. In speaking of sprains, M. Delorme states that he has seen a large number of a form to which he applies the term "entorse des cavaliers," or rider's sprain, which is common amongst troopers. It arises from the fact that at the moment of falling the foot is slightly extended, and touches the ground first with the toes, then with its whole external border. The weight of the animal now bears on its internal border or more rarely on the toes alone. Lastly, the stirrup, which habitually occupies an oblique position, directly twists the fore part of the foot upon the after part. The pressure on the external border of the foot, caused by the rotation of the toes from without inwards, and of the forced adduction, is exerted on the metatarso-phalangeal articulation upon the external tarso-metatarsal articulations, upon those of the astragalus, and secondarily upon the external ligaments of the tibio-tarsal joint. Sprains of this kind are of the most serious nature, and disable a man for a longer period than many fractures.

Those who are interested in the various forms of amputation of the foot will find here a very full account of the different methods that have been adopted from the time of Baudens (1840) to the present day, including those of Malgaigne, Roux, Morel, Jobert, Sédillot, Soupart, Pelikan, Syme, Johnston, Lefort, Guérin, and Delorme.

Strangeway's Veterinary Anatomy. Second Edition. Revised and edited by J. VAUGHAN, F.L.S., F.Z.S. London: Baillière, Tindall, and Cox.

CONSIDERING the yearly increasing value and importance of the domesticated animals, and the consequent necessity for knowing everything relating to their health or utility, it might be expected that books which treat of their structure, physiology, diseases, and sanitary management would be numerous and excellent. But, so far as we are aware, this is not the case in this country. Until within the last few years the list of veterinary works was a miserably small one, and contained very few treatises which were worthy of notice. The standard of veterinary education in England would appear to have been remarkably low, or the encouragement to write or study very meagre or altogether absent, and, judged by the paucity of technical works, there

is reason to believe that veterinary medicine was far from occupying the position it should have done. For it can scarcely be denied that the literature of a profession, in its quantity and quality, is a very good criterion of its status. Veterinary books have been chiefly of the popular kind, and written with the view to being purchased by those of the general public who were anxious to know how to "doctor" their own animals. Therefore it is that scientific works are scarcely existent, and may almost be counted on the fingers of one hand. There is not a treatise on the physiology of the domestic animals in the English language, nor yet a scientific work on veterinary pathology or surgery. It is only in anatomy that we can find evidence of a desire to put matters on a proper footing, and to provide the student with assistance in laying the foundation of his professional knowledge. We have the excellent translation of Chauveau's fine text-book, Strangeway's smaller and very much less complete or useful work, and one or two other less notable manuals. The first edition of Strangeway's book left much to be desired, and the necessity for a new edition gave Professor Vaughan an opportunity for effecting various improvements and alterations, which make it more useful and trustworthy, but which increase it in size and price. Some woodcuts and plates have been borrowed from other sources than Leyh's anatomy, which furnishes the majority of the illustrations; and the directions for dissection, which are, strange to say, at the end of the work, are those given by Chauveau, from whom all the leading facts in zootomy found in the volume are derived. Nearly all the space is devoted to the anatomy of the horse, the other domestic animals receiving only a very small share of attention, possibly because they are rarely, if ever, dissected; though a knowledge of their structure, very valuable as some of them are, must be of importance to the veterinary surgeon.

On the whole, the present edition is a great improvement on its predecessor, and will be useful to those students who have not leisure, ability, or inclination to acquire an intimate acquaintance with the anatomy of the various animals which come under the hands of the surgeon for treatment. The descriptions are clear and brief, and if we might complain that most important organs receive a very cursory notice—for example, the horse's foot—we must remember that the book is not designed for thorough-going students of anatomy, but for those who are content with a rudimentary knowledge.

OUR LIBRARY TABLE.

The Journal of Anatomy and Physiology. Edited by Profs. HUMPHRY, TURNER, M'KENDRICK, and CREIGHTON. Vol. XIV.; Part I. Oct. 1879. London: Macmillan.—This part contains the following amongst other articles:—1. An account of a case of Præsternal Fissure uncovering the base of the Heart; by George A. Gibson and Henry Malet. In this case some tracings having an important relation to the movements and sounds of the heart were taken, which should be read in connexion with the paper by Allen Thomson on M. Groux. This gentleman may be remembered by some of our readers as attending several of the medical schools of the metropolis some years ago with a fissure of the sternum, and who, it appears, has recently died. 2. Dr. W. Osler gives a case of Congenital and Progressive Hypertrophy of the Right Upper Extremity. 3. Prof. Flower and Dr. Garson contribute a paper on the Scapular Index as a Race Character in Man. 4. Dr. Allen describes the varieties of the Atlas in the Human Subject, and the homologies of its transverse processes. 5. Dr. Creighton discusses the Infection of the Connective Tissue in Scirrhous Cancer of the Breast. 6. Dr. M. Watson, of Owens College, contributes a valuable paper on the Homology of the Sexual Organs, illustrated by Comparative Anatomy and Pathology, in which the varieties of hermaphrodism in man are interestingly compared with the normal conditions of many animals. 7. Mr. Bridges describes the Peri Abdominales of Vertebrata; and Prof. Turner gives some extracts from his note-book on the Pori of some Sharks. 8. Dr. John Barlow, of Glasgow, describes the Physiological Effects of Ozonised Air. It was found that in rabbits it reduced the number of respirations, depressed the nervous system, and produced a condition of bronchitis. Lastly, Prof. J. Charles, of Cork, gives a short paper on the mode of Propagation of Nervous Impulses.

The Journal of Physiology. Edited by MICHAEL FOSTER, F.R.S. Vol. II. No. 3. London: Macmillan. 1879.—This part contains the following six monographs:—C. Sihler, On the so-called Heat Dyspnœa; H. P. Bowditch, Physiological Apparatus in use at the Harvard Medical School; James J. Putnam, Description of a modified Pendulum Myograph, and on the Reliability of Marey's Tambour in experiments requiring accurate notations of time; James Ward, Some Notes on the Physiology of the Nervous System of the Freshwater Crayfish; and, lastly, F. I. M. Page, Some Experiments as to the Influence of the Surrounding Temperature on the Discharge of Carbonic Acid in the Dog. Dr. Putnam draws the satisfactory conclusion that M. Marey's tambour is reliable in time experiments to ·001" to ·002". There is a good list of books and papers of physiological interest published since December, 1878.

Practical Surgery, including Surgical Dressings, Bandaging, Ligations, and Amputations. By J. EWING MEARS, M.D., Demonstrator of Surgery in Jefferson Medical College. With 227 Illustrations. Philadelphia: Lindsay and Blakiston.—This is a well and pleasantly-written little book, richly illustrated with good woodcuts, and full of thoroughly practical teaching. The selection of the subjects treated is strange, for some are the details of "minor" surgery, and others the most formidable operations ever undertaken. In each department it is, as its title tells, very incomplete. In the first part, dealing with "minor surgery," no directions are given for "setting" fractures, reducing dislocations, passing catheters, removal of foreign bodies, &c. And among major operations, only ligations and amputations are described, and excisions of tumours or of joints; lithotomy, trephining, and many others are not mentioned. Good as the book is, we cannot but feel that it would have been better to deal with the subjects more generally.

The Management and Diseases of the Dog. By J. WOODROFFE HILL, F.R.C.V.S. London: Baillière, Tindall, and Cox.—A good work on the dog was much required, and Mr. Hill has endeavoured to meet the requirement. The directions for management are based on sound principles, and such as should be observed by everyone who keeps a member of the canine fraternity in his establishment. The diseases of dogs are well described, some maladies finding a place for the first time; while the treatment recommended is judicious and appropriate. The accidents to which the dog is liable are fully treated of, their remedies explained, and the various operations rendered necessary at times are dealt with in detail. A number of good illustrations enhance the value of the book, which marks a distinct advance on previous works on canine pathology, and can therefore be recommended to those interested in this subject.

THE current number of the *Nineteenth Century* is one of the best ever issued. Among many valuable and interesting articles is one by Sir James Paget, entitled "Escape from Pain: the History of a Discovery." This history is, of course, the history of the introduction of anæsthetic agents into surgical practice. It is difficult to summarise the article, and, indeed, it is undesirable to do so. Everyone should read it in Sir James's pure English. The same

periodical contains an article by Dr. Julius Althaus on "The Functions of the Brain."

The *Contemporary Review* this month is largely theological. The article on "Miracles, Prayer, and Law," by Mr. J. Boyd Kinnear, has, however, considerable interest for medical men and physiologists.

The high literary and critical merits of *Fraser's Magazine* are maintained in the December number.

Analytical Records.

SODÆ SULPHAS EFFERVESCENS.—SODIO-MAGNESIÆ SULPHAS EFFERVESCENS.

(W. MARTINDALE, 10, NEW CAVENDISH-STREET, W.)

EACH of these preparations contains half its weight of the active agent—sulphate of soda in the one case, and a mixture of the sulphates of soda and magnesia in the other. They are deserving of commendation as simple, portable, and reliable.

IODIDE OF ETHYL CAPSULES.

(W. MARTINDALE.)

These ingenious novelties consist of small sealed glass tubes, each containing five minims of the ether, and each wrapped, first in cotton-wool, and then in white silk. The pressure of the thumb and finger breaks the glass, the extremely volatile liquid saturates the cotton-wool, and the vapour can be inhaled for several minutes. The ether is remarkably pure, containing hardly a trace of free iodine, and as it is protected from light and air, it is likely to keep. Of course the patient requires no assistance, and can take one of the capsules from the bedside even in the dark.

GENOVEVA NATURAL MINERAL WATER.

(MESSRS. O'REILLY & CO., 81, OLD BROAD-STREET, E.C.)

This mineral water comes from the volcanic region of the Eifel, near the Laacher Lee, on the Rhine, and contains as chief ingredients carbonate of magnesia, carbonate of soda, carbonate of lime, and sulphate of soda, in conjunction, of course, with the usual small quantities of silica, iron, potash, lithia, &c. It is a mild aperient, but extremely pleasant to the taste, sparkling, clear, and refreshing.

BISHOP'S GRANULAR EFFERVESCENT EXTRACT OF NUX VOMICA, AND GRANULAR EFFERVESCENT CITRATE OF CAFFEINE.

(MESSRS. BURROUGHS & CO., SNOW-HILL, LONDON.)

Mr. A. Bishop has added the above two preparations to his list of granular effervescents. The excellence of these is so well known that we need not say anything in favour of the two new members of his catalogue. The first of the above preparations contains in one drachm one-twelfth of a grain of extract of nux vomica, whilst the second contains one grain of caffeine per drachm. In both preparations the bitter taste of the alkaloids is very considerably masked.

STARR'S EXTRACT OF BEEF.

(MESSRS. BURROUGHS & CO., SNOW-HILL, LONDON.)

This extract of beef consists of a smooth, thick, beef-tea of pleasant flavour, fine colour, and ready solubility in warm water. It is not only of a high degree of excellence itself, but it is elegantly and ingeniously put up.

AERATED WATERS.

(THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION, LIMITED; 45, GIFFORD-STREET, CALEDONIAN-ROAD.)

A number of samples manufactured by the above Association have been sent to us. Those that we have examined have been of good quality, and quite free from dangerous constituents, such as lead.

NELSON'S BEEF-TEA.

(MESSRS. G. NELSON, DALE, AND CO., 14, DOWGATE-HILL, E.C.)

THIS is an ingenious and excellent preparation. It consists of good beef-tea mixed with a sufficiency of gelatine to harden it, and the whole is dried and cut into fine shreds, similar to those in which the gelatine of the same well-known manufacturers is sold. In this state it dissolves readily in warm water, keeps for an indefinite length of time, and is very portable. Its flavour is all that could be desired; and if we add to this that the article includes not only those constituents of the meat which are soluble in hot or cold water, but also much of the fibrin and the whole of the albumen (the latter both in the soluble and the coagulated states), it will be conceded that Messrs. Nelson, Dale, and Co.'s new beef-tea preparation justly merits high praise.

HEALTH OF LARGE ENGLISH TOWNS.

FORTY-NINTH WEEK OF 1879.

THE rate of mortality under the influence of the late severe weather showed a further increase last week. In twenty of the largest English towns, containing nearly a third of the entire population of England and Wales, 4917 births and 3883 deaths were registered in the week ending last Saturday. The births were 265 below, whereas the deaths exceeded by 513, the average weekly numbers during 1878. The deaths showed a further increase of 316 upon the increasing numbers in recent weeks, and were equal to an annual rate of 27·4 per 1000, against rates which increased steadily from 21·9 to 25·2 in the five preceding weeks. During the past five weeks of the current quarter the death-rate in the twenty towns has averaged 22·7 per 1000, against 22·2 and 23·5 in the corresponding periods of 1877 and 1878. The lowest death-rates in the twenty towns last week were 18·2 in Salford, 19·8 in Portsmouth, 21·4 in Norwich, and 22·0 in Oldham. The rates in the other towns averaged upwards to 28·8 in Newcastle-upon-Tyne and Plymouth, 29·6 in Brighton, 37·3 in Liverpool, and 43·8 in Wolverhampton.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 442 to 551 in the five preceding weeks, were 534 last week, of which 162 resulted from scarlet fever, 150 from measles, 94 from whooping-cough, and 54 from fever, principally enteric. The annual death-rate from these seven diseases averaged 3·8 per 1000 in the twenty towns, and ranged from 0·6 to 1·4 in Norwich and Oldham, to 4·7 and 6·6 in Leeds and Liverpool. The fatality both of scarlet fever and of measles showed a decline last week; that of scarlet fever was proportionally greatest in Newcastle-upon-Tyne and Sunderland, and that of measles in Liverpool, Nottingham, and Leeds. The deaths from whooping-cough were again somewhat more numerous, especially in London and Leeds. The fatality of enteric fever was greatest in Leeds, Sheffield, and Portsmouth. The 24 deaths from diphtheria included 15 in London, 4 in Liverpool, and 2 both in Birmingham and Manchester. Small-pox caused 5 more deaths in London, but not one in any of the nineteen large provincial towns. The Metropolitan Asylum Hospitals contained 37 small-pox patients on Saturday last, against 46 at the end of each of the three preceding weeks.

The increase of mortality last week, although well-marked, was scarcely so large as might have been anticipated as the result of the recent severe weather, the full effect of which has, however, not yet appeared in the mortality returns. The 1888 deaths registered in London during the week exceeded the corrected average in the corresponding week of the last two years by but 86, notwithstanding the exceptionally severe weather. The deaths referred to diseases of the respiratory organs rose to 612 in London last week, from 499 and 576 in the two previous weeks. The annual death-rate from diseases of the respiratory organs and phthisis was equal to 11·2 per 1000 in London last week, against 14·6 in Liverpool.

THE LANCET.

LONDON: SATURDAY, DECEMBER 13, 1879.

THE discussion on Animal Vaccination, which took place in the rooms of the Medical Society of London on the 4th instant, at the instance of the Parliamentary Bills Committee of the British Medical Association, although still uncompleted (the discussion having been adjourned to the 18th inst.), has served to clear up certain points and to indicate more or less plainly what are the difficulties in the way of the introduction of animal vaccination into this country. Although there was some tendency to regard the discussion as a contention between two opposing factions, the thoughtfulness of Professor WORLOMONT and the moderation of Dr. CAMERON, M.P., and of others who followed him, prevented the debate from degenerating into a mere airing of individual opinions, irrespective of other considerations. The first important outcome of the meeting was to show clearly the real aims of the movers in the matter; the second and not less important outcome was to show that there was no substantial difference as to the principle of animal vaccination among the different persons who spoke on the occasion. Indeed, this became very manifest as the discussion proceeded, and when the further consideration of the subject of debate was adjourned, it was obvious that the sole question which remained to be dealt with seriously was that of the mode in which the practice of animal vaccination could be introduced into this country without undue disturbance of the existing practice of arm-to-arm vaccination. If the adjourned discussion can be confined to this question, we may anticipate the happiest results from it.

Nothing could well have been more impressive, or have exercised a more profound influence over the crowded meeting, than the manner in which Professor WORLOMONT, in his address, pointed out, as primary considerations—(1) that animal vaccination should have no tendency to forcibly supplant vaccination from arm-to-arm; (2) the necessity for the scrupulous observation of arm-to-arm vaccination in countries where the population is much scattered; (3) the importance of the State Vaccine Institute repudiating any claim of substituting animal vaccination for traditional practices. Finally, he averred that "vaccination from arm to arm, strong in its ancient rights, is, and will long yet remain, the greatest strength against small-pox, and nothing ought to be omitted to encourage and regulate it." Professor WORLOMONT simply claimed for animal vaccination the position of being the faithful auxiliary of arm-to-arm vaccination, but "an auxiliary so useful that it would be as unjustifiable to pass it by as to desire to upset suddenly the classical method." Other speakers in favour of animal vaccination adopted the same tone, and when Dr. STEVENS, one of the medical inspectors of the Local Government Board, and superintendent of the National Vaccine Establishment, who intervened for the purpose correcting some errors of statement, observed that he had personally no objection to take against the use of animal vaccine lymph, that the institution which he supervised was, as its history he maintained had throughout shown, prepared to better its proceedings whenever it was ascertained that this could be effected, but that the Government had a duty imposed upon it of guarding against any of the serious consequences to the arm-to-arm vaccination established in this country, which Professor WORLOMONT and others had deprecated—the discussion as to the merits of animal vaccination was at an end.

Indeed, it may be taken from the statements of Dr. STEVENS, and from the fact that Dr. BALLARD has been selected by the Local Government Board to represent that Department in the discussion (Dr. BALLARD'S proclivities in favour of animal vaccination being well known), that the difficulties attending some introduction of animal vaccination into this country experienced in Whitehall are difficulties affecting administration, not principle. What these difficulties are we shall no doubt learn more particularly when Dr. BALLARD reopens the discussion on the 18th. Meanwhile we may in some measure infer their nature by incidental observations made on them in Thursday's discussion, which enable us more fully to understand the bearing of the provisions of Dr. CAMERON'S Bill. This Bill provides for two principal things—the optional use of animal lymph by parents or persons in charge of infants, and the provision of such lymph by the Local Government Board. In the event of a public vaccinator refusing to vaccinate with such lymph (or in other words, of animal lymph not being forthcoming) when demanded, the parent or person in charge is to be exempt from the penal provisions of the Vaccination Acts. Obviously, under a measure of this sort, if the arrangements for the cultivation and distribution of animal lymph were not co-extensive with the arrangements for public vaccination, arm-to-arm vaccination would be brought at once to a deadlock, and the backbone of vaccination, in Professor WORLOMONT'S view, broken. Now the British Medical Association suggests, in regard to Dr. CAMERON'S Bill, the establishment, in the first place, of a single station for the cultivation of animal lymph in London. No exception can be taken, at least, to the moderateness of this suggestion; but grave doubts may be entertained as to its sufficiency, even for the metropolis alone, with an aggregated population equal almost to the whole of that of Belgium; while, for the purpose of public vaccination, existing arrangements make the population of England, as to this matter, one connected whole. Again, Mr. GREENE, of Birmingham, made it pretty obvious that in the most experienced hands animal vaccination and the cultivation of animal lymph presented peculiar difficulties, which must be seriously felt at the beginning of any attempt to introduce the practice into this country. Professor WORLOMONT himself once wrote that "calf vaccination is so difficult and anxious a business that he could not desire a better occupation for his dearest enemy."

It may be inferred, then, that there are special difficulties to overcome in the introduction of animal vaccination as a part of our public vaccination arrangements here, which can only be met by careful tentative efforts, and by a preliminary period of experimental observation, if the existing arm-to-arm vaccination is not to be endangered. Dr. CAMERON

frankly spoke of his Bill as provisional, and of his readiness to accept modifications; but a question arises for consideration—Whether proceeding by way of a Bill in Parliament is desirable? And again, Whether it would not be better, now that it may be assumed that the Local Government Board is prepared to accept the principle of animal vaccination, to bring pressure on that department at once to make the necessary arrangements for determining the conditions on which animal vaccination may be introduced into this kingdom without undue disturbance of arm-to-arm vaccination? There does not appear any necessity for additional legislation in order that the Local Government Board should undertake this duty, and no question can arise as to the competence of its staff. But Mr. GREENE, if we understood him aright, expressed a doubt whether, under present circumstances, it would not be most advisable that the introduction of animal vaccination should be effected by a private association, without interfering with public arrangements. This is certainly a view of the question which deserves and will no doubt receive consideration at the adjourned discussion on the 18th.

THE new Army Warrant which has been issued, after an exceptionally long delay, affording the amplest opportunity for mature consideration in respect to all its details, cannot be treated as a carelessly-drawn document, but must be held to challenge the closest scrutiny. If it betrays half-heartedness, or a grudging spirit in regard to any of the concessions it seems to make, it is only fair and, we take leave to say, politic, to assume that the sentiment by which the authorities are animated is no warmer, but, on the whole, somewhat more lukewarm, than the terms employed appear to indicate. It is desirable to lay some stress on this fact, because it must be remembered that this Warrant has been framed, and is now promulgated, at a timely moment—a few days before the examination of candidates for the medical service, with the avowed object of attracting young members to a service which has of late years fallen to the lowest depths of evil repute, not only because the conditions of work and pay were bad, but, it is sad to say, because the employed have had cause to distrust their employers. This makes it the more necessary to be well assured as to the *bona fides* and the precise terminology of the new compact which the War Office professes its readiness to make with those members of the medical profession who may be willing to devote themselves to its service. We use this form of words advisedly, because it should be borne in mind that the contract to be entered into with the State when a surgeon, as such, becomes attached to the army is based on a tender of *professional* services. In this respect the arrangement differs wholly from that which obtains when a young man, endowed with the advantages of a good general education, undertakes to serve as a combatant or engineer. The latter brings special aptitude to a department of military work, but it is virtually by the State he is trained; whereas the medical man must be armed *cap à pie* for the battle of life before he essays to enter Her Majesty's employ. It is fully skilled labour he brings to the market, and he has a right to be treated as entitled to the status such a qualification implies from the moment he joins the forces. This consideration plainly overrides the plea ungenerously set up in recent years, that the medical men asked to enter the army are "young," and may therefore be dealt with as youths on the threshold of a career, to be schooled by disappointment, and rewarded rather according to the considerations of public or political convenience than their own just claims. It is not our purpose on the present occasion to discuss the new Warrant in detail. That will be a work of time. Meanwhile there are two or three salient points to which, in the interests of prudence, personal and public, it is desirable to direct attention. We have already summarised the general terms of the change inaugurated by this circular, and accorded a full recognition to the advance offered in the matter of pay. The remarks we have now to make apply to topics of not less moment or, in a sense, fundamental concern.

Clause 6 provides that "Every candidate for appointment in the Army Medical Department shall possess two diplomas or licences, recognised by the General Medical Council, one to practise Medicine and the other Surgery, and shall be registered under the Medical Act in force in the United Kingdom at the time of his appointment." Now it is important to assume that the Warrant just issued is to form the basis of a permanent arrangement; but what, in the face of impending medical reform, and the institution of a one-portal system for the profession as a whole, is to be inferred from the requirement of two diplomas or licences? We would fain take the highly satisfactory impression that the War Office is at length awakened to the necessity of raising the professional status of the Medical Department, and will in future require special diplomas *in addition* to any minimum qualification which may be instituted under a Conjoint Scheme, or by a State entrance-examination. If it were actually true that candidates for medical service in the army would in the near future be required to present proofs of learning in the shape of special diplomas, as well as the mere pass-licence of coming days, the profession might well hail a movement so entirely in harmony with the spirit of progress, and the young men now entering could look forward to an honourable scientific career. This is, however, too good to be true; and we are driven back upon the alternative conclusion that either the framers of this Warrant are confident that "medical reform" is not an impending change, or that the Circular now issued may be, at no distant period, withdrawn and revised. In short, a straw will show which way the wind blows; and reluctantly giving up the first interpretation suggested, and setting aside the hypothesis as to an influential opinion on the prospects of medical reform, we are compelled to believe the Warrant now issued is sent out with the consciousness that it will before long be superseded. The omission to provide for a possible change—not, it *might* be thought, unlikely to occur within the ensuing year—in the nature of medical qualifications generally, is the more significant because provision *is* made for the registration of the candidate "under the Medical Act in force in the United Kingdom at the time of his appointment." Of course it is possible to contend from this that the War Office does contemplate reform, but disbelieves in the adoption of a one-portal system, or is determined to exact more from candidates than the pass-licence; but we fear the theory of a temporary duration for the Circular now issued is the more probable explanation

of what, on the face of the document, constitutes a remarkable omission! Above all things the profession asked for a *permanent* basis of contract, and if this modest requirement be not granted, it will become our duty once more to raise the voice of warning, and urge those who are about to enter the "Army Medical Department" to look before they leap.

Again, we feel compelled to ask plainly whether the nomination offered, on paper, to the medical schools is to be carried into effect, or whether it is only a springe to catch the unwary? There may be "difficulties" in giving effect to the provision incorporated in the Warrant at the suggestion of Lord CRANBROOK'S Committee, but are those difficulties to be overcome, or are the schools to be hoodwinked? We fear there are reasons why this question should be pointedly asked and honestly answered. If this, by no means unimportant, feature of the Warrant is to be left to its fate, other features, not excepting the conditions of service and pay, may be waived. Reading between the lines, we confess it does seem that discretion must be shown in accepting the Warrant as final. Some who are competent to form an opinion do not feel assured by the Warrant as it stands that it is really intended to be carried into effect. Looking to the time which has elapsed since the Warrant was first drawn and submitted to the authorities, there has been ample opportunity for the issue of a schedule giving shape to Clause 10: "Our Secretary of State shall from time to time fix the order of procedure and the proportion in which the several schools of medicine shall be offered the nomination of candidates." Why this holding back of the Warrant until the eve of an examination, and then its issue without any procedure to give the medical schools a share in filling up the existing vacancies? Does this look like good faith?

The question of promotion is left in a predicament equally unsatisfactory. Up to the grade of surgeon-major—that is, for the first two steps, while the advance goes by seniority—the Director-General is to recommend; but the moment promotion becomes a matter of selection the Director-General loses his voice in the matter. The advance is to be made, and, in plain words, *all the important posts* in the Army are to be filled with medical officers distinguished for "ability and merit, upon the selection of our Commander-in-Chief." As a matter of fact, *all* promotions are and must be made by the Commander-in-Chief. It is therefore the more significant that from the rank of surgeon-major upwards there will be no participation of the Medical Director-General in promotion! It is not any explanation of this strange omission to say that the present Warrant follows its predecessor, and conforms to the Order in Council, or that the Director-General *may* have a voice where the Circular does not give him any. The profession has had enough of trusting to *may-be* and probability. We have a right to ask that for the future the agreement *shall* be so precise and plain that it cannot possibly be "misunderstood."

We will not on this occasion advert to more than one other point in respect to which the terms of a Warrant, in the main good, need to be amended. Why is the *surgeon* to be disallowed forage? If it be said he ranks with a captain, this explains nothing. It is no part of a medical man's duty to march at the heels of a regiment. The captain cannot ride in the discharge of his duties. The surgeon, on the other hand, can scarcely perform his duties unless he rides. When a captain has duties to discharge beyond his company, when he acts as adjutant, he rides, if he does not rank, as a field officer. Surely the surgeon is presumably on the footing of the latter. Forage is a due to all ranks of professional men in the service. It is acknowledged to be a necessary on active service. This alone should make it a right on all occasions.

We will not now pursue the subject further into detail, but enough has been said to show the unwisdom of haste in pronouncing a final judgment on concessions in respect to which everything must depend on what they actually mean, and the way in which they are carried into effect.

THE discussion on Antiseptic Surgery, opened by Mr. MACCORMACK on the 3rd inst., at St. Thomas's Hospital, is of considerable interest to English surgeons. It is admitted by most persons conversant with the subject that within the past five-and-twenty years there has been a growing tendency to treat injuries on the principle that the discharges collecting in and around a wound are detrimental to the patient, and therefore the old and elaborate system of packing wounds in poultices and other close dressings has gradually been discarded. The majority of surgeons admit that this alteration in the manner of treating wounds is largely due to the example and teaching of Mr. LISTER, and it is certain that he originated the idea of preventing the occurrence of putrefaction in the discharges from a wound, and of thus saving his patients from septic toxæmia arising from the absorption of decaying matter into the circulation. Very little was said by the surgeons who took part in the debate regarding the germ theory, but they at once proceeded to consider the real question at issue, as to whether Mr. LISTER'S system of dressing affords patients a better chance of recovery than any other method of treatment. Mr. BRYANT, on the one hand, contended that although he felt himself under considerable obligations to Mr. LISTER for having forced on his attention the importance of strict cleanliness in surgical dressings, he was not disposed to endorse Mr. LISTER'S conclusions as to the necessity for employing the carbolic spray and antiseptic dressings. Mr. BRYANT'S views nearly coincided with those expressed by Mr. SAVORY in his address on the subject at Cork, and it is therefore evident that two of the senior surgeons of the largest London hospitals, although claiming to practise antiseptic surgery, so far as strict cleanliness is concerned in the treatment of wounds, decline to subscribe to the doctrines or practice inculcated by Mr. LISTER.

On the other hand, Mr. SPENCER WELLS argued that, so far as his experience goes, it demonstrates the fact that as he has become more accustomed to the method and details of LISTER'S treatment, his success has unquestionably been greater than at any former period of his career; he has not had a single death among his last thirty-eight cases of ovariotomy, under a strictly Listerian plan of treatment. His statistics demonstrate as clearly as figures can do that his success has been in proportion to the care with which he has followed out purely antiseptic surgery in the management of his cases.

Mr. LISTER was disinclined to refer the question at issue to figures; he appeared disposed to agree with several of the surgeons who took part in the debate, that it was most difficult to bring statistics to bear on a matter of this kind, because the circumstances of patients differ so materially as regards age, constitution, habits, and occupation, so that it is well-nigh impossible to find half a dozen cases exactly alike. Then, again, one surgeon differs from another in his ideas regarding the method to be employed in bringing out the statistical results of practice. Mr. LISTER, however, remarked that it was a mistake to suppose he had declined to give figures referring to his practice, for when he left Glasgow he published a statistical account with reference to hospital diseases, and again at the meeting of the British Medical Association at Edinburgh in 1875 he gave an account showing that, although he had been working under most unfavourable hygienic conditions, a still further progress had been made in hospital salubrity.

It is impossible to follow Mr. LISTER through the results of his cases since 1871 without being convinced of the almost insurmountable obstacles to be overcome before we can arrive at any accurate conclusions regarding the advantages of his system from a statistical point of view. For instance, Mr. LISTER includes among his list of capital operations three cases of spina bifida, in which he simply punctured the tumour; the patients all died, thus materially increasing his percentage of deaths after operations. It does not seem to us by any means plain that the relative value of LISTER'S system as compared with other methods of dressing wounds can be determined by figures, but must rather be referred to the accumulating conviction of individual surgeons on the subject; and Mr. MACNAMARA was not far from the mark when he observed that the circumstances of various surgeons must to a large extent influence their line of practice. If their cases are drawn from among a comparatively well-fed and well-housed population, and admitted into hospitals under the charge of some of the most eminent surgeons of the day, with admirable assistants, nurses, and everything that almost unbounded resources can command, their patients seem to do remarkably well without the use of LISTER'S system of dressing; but among a poorly fed population, located in badly drained and imperfectly watered towns, the results of surgical practice will be very different. Pyæmia, septicæmia, and erysipelas too commonly occur in spite of all that can be done, and under these circumstances the testimony of men holding the highest position in the profession is such as to render it impossible for us to entertain any doubt whatever regarding the very great advantage to be derived from a strict adherence to Mr. LISTER'S system of dressing wounds.

THE practice of midwifery on a very large scale by general practitioners is one that has often appeared to us open to objection. Our attention is repeatedly drawn to it in one way or another; recently by the sudden death of a respected citizen and useful practitioner of Carlisle, Dr. HAY. Dr. HAY'S death was so sudden—occurring in an afternoon sleep after dinner—as to be made the subject of an inquiry by the coroner. His housekeeper, who had been with him many years, said that he often lay down in the afternoon. He was a bad sleeper. He went to bed the previous night at eleven, but did not sleep long, as he was called up about two o'clock. He went out and did not return till nine. He had an extensive midwifery practice. His housekeeper had known him attend four cases in one day. No wonder that he often lay down, as the housekeeper said, in an afternoon; and there is scarcely more to wonder at in the fact that he seems to have taken a dose of chloral—inadvertently too large a dose—to steal a little sleep in the short interval which seemed available after his dinner. Some men have the power which it is said some great generals have had, and which Sir ASTLEY COOPER had, of going to sleep quickly at will. For men whose duties are irregular in point of time, and whose responsibilities are great, this quality is invaluable. For an accoucheur this is so. To be able to sleep in any available corner, at any hour of night or day, is a quality which every accoucheur should have. Some country practitioners have been able to sleep in their saddle, the horse knowing the well-worn round almost as well as his master. But woe to the accoucheur in large practice who is a bad sleeper! Something is almost bound to give way—either his health or his habits. He is exceedingly apt to drift into physiological irregularities, into artificial shifts and substitutes for sleep and food, under which, apart from any accident of inadvertency, health and strength fail. The work becomes more irksome. But it will not wait; it will not come at convenient seasons, and with periodical intervals for repose. There is no consideration in obstetric engagements. They are inexorable, and must be met, whatever the exhaustion of the practitioner. He lies down with a sense of insecurity such as no other men can understand. If not disturbed, he dreams of being disturbed, and the very habit of sleep is lost in some cases. The demand upon the vital powers imposed by a large midwifery practice would be enormous even if there were no casualties or abnormalities. The mere interruption of sleep and interference with leisure and food-taking would of themselves be injurious enough; but every practitioner will be ready to admit that bad obstetric cases cause him more anxiety and take more out of him than any other class of cases. We are well aware that there are men who can attend two or three hundred cases annually for many years, yet attain to three-score-and-ten and fourscore years. But they are no rule for ordinary men; they only show by such endurance that they have exceptional strength. Such duties prematurely impair the powers of most men, who either abruptly break down or have recourse to expedients of one sort or another which their own judgment condemns. We are not peculiar in holding these views of the injurious effect of attendance on a large number of midwifery cases in the year. They were well expressed a few years since in the General Medical Council by the late Dr. FLEMING and by Sir ROBERT CHRISTISON. Dr. FLEMING said he often figured to himself a busy practitioner in a country district, harassed with the toils and responsibilities of his practice, detained for hours, waiting, probably in not very comfortable circumstances, till Nature performs a process which he could do nothing to assist. Sir ROBERT CHRISTISON said he believed there was nothing more injurious to practitioners in rural districts than their being compelled to attend females in ordinary cases of labour.

It is easier to point out the evils of such a kind of practice than to indicate the remedies. It is not a slight service, however, to point out the evils. To be forewarned is to be forearmed, and many a man only needs to have such evils pointed out to have his own ingenuity set in motion towards their prevention. We will not shrink, however, from a few words of general advice on this important subject. The chief thing we would say to a practitioner who is rising into popularity as an accoucheur is to form a judicious estimate of his powers, and to accept only such a number of cases as he can comfortably attend himself, or attend with the assistance of a duly qualified practitioner. Some medical men carry on a large obstetric practice with the aid of an unqualified assistant. Undoubtedly the law gives some sanction to this. It regards midwifery as something outside the pale of disease, as not requiring special medical training and knowledge, a thing to be done by ignorant midwives. But the days of this ignorance are doomed; and no medical man can be associated with midwifery without a great sense of responsibility. This is not relieved by handing over the bulk of the cases to an unqualified assistant, even if such a practice were fair to other practitioners. Neither is it fair to himself or to his patients. The remarks of Dr. FLEMING and Sir R. CHRISTISON were made in support of a scheme for providing well-trained midwives. But such aid would not release medical men from the duty of conserving their own powers. This is to be done chiefly by a well-timed rise in fees, which has the double effect of raising reputation and increasing the amount of leisure. It is hard to say "No" to new cases; but the protective fee should be put on with decision. Cases that are declined go to afford welcome employment to younger men, who do not think the less of their senior neighbour who, by such a course, preserves at once his health and reputation and the dignity of the profession.

WE have frequently referred of late to the modifications in the Primary Examinations at the Royal College of Surgeons, and more recently to some changes in the subjects for the Natural Science Tripos at Cambridge. It would seem that the examination arrangements at the University of London, which we had always been taught to look upon as almost perfect, also fail to satisfy some critics, and that alterations therein are being discussed both by the Annual Committee of Graduates and by a special sub-committee of the Senate. At the last meeting of the Annual Committee a resolution was unanimously carried that it was desirable for the Preliminary Scientific M.B. and First M.B. examinations to be held twice annually instead of once, as at present. Drs. POORE and CURNOW were asked to draw up a report embodying the reasons for the change, and it will be laid before Convocation at its next meeting in January, when the votes of the graduates will be taken on the advisability of the alteration. With regard to this we think that there can be but one opinion. The number of candidates at both of these examinations is steadily increasing, and the examiners are beginning to experience a difficulty in fairly testing their knowledge, especially in the practical subjects. In Practical Chemistry, for example, the rules laid down in the Calendar could not be followed at the Honours Examination, owing to the large number who desired to be examined therein. Some change, therefore, is imperative, and is now under the consideration of the Senate. Two examinations annually would afford the simplest solution of the problem. Moreover, a large number of medical students are deterred from entering on, or give up after having begun, the long curriculum for the degrees of the University of London, because of the great intervals between the examinations. If a candidate fails, even in one subject, he cannot be re-examined until the next summer. This seems the more absurd when we consider that if he is rejected in Botany at the Preliminary Scientific Examination, or in Materia Medica at the First M.B., he can only obtain the advantage of a three months' course at the hands of his teachers unless he makes special tutorial arrangements. The published statistics of the University show that at the earlier examination a very large percentage fail in only one or two subjects, and it is most unfair that these students should be compelled to wait so long for re-examination. If we take the year 1878 for example, out of a total of 71 failures, 28 were in one subject only, and 21 in two subjects. The effect of the long interval is that students either become disheartened and do not again attempt the examination, or they endeavour to pursue their scientific and medical studies at the same time, to the great detriment of both. We cannot gather from the statistics of the First M.B. examination the number of rejections in single subjects, but we have reasons for believing that the proportion is much the same as at the Preliminary Scientific. It is obvious that this must influence a large number of very good students, many of whom are quite equal to their *confrères* who are successful in obtaining the coveted distinctions of the University. The University of London is the only one in England or Scotland, with the sole exception of Oxford, which is so regardless of its best interests as to put such unnecessary obstacles in the way of the candidate who is seeking its degrees, and an important reform can be easily effected by which the number of its medical graduates would be materially increased, without in any way lessening the severity of the examinations, or lowering the *prestige* of its degrees.

The Committee of the Senate is disturbed by an entirely different question. Energetic reformers have boldly declared that the examination for the M.D. degree is useless, and that its character ought to be completely altered. It is said that the written papers and the clinical examination merely repeat the examination in Medicine at the Second M.B., that the commentary on a case in medicine is practically only a conundrum for the display of shrewd guesses on the part of the candidates, and that the Logic and Moral Philosophy offer a strange instance of the survival of a mediæval and scholastic tradition. The remedy that is suggested by some is to revive the "thesis," and so induce in the London graduate the true spirit of scientific research, the possession of which must be shown to the examiners in his dissertation; whilst others would compel him to familiarise himself with some epoch in the history of medicine to be selected by the Senate, and announced some time previously. We think that if either of these crude propositions be adopted by the authorities of the University much mischief will be done, and that instead of improving

the examination it will have an opposite effect. Forcing candidates to get up a certain era in the history of our art is only comparable to compelling school-boys to learn so much poetry or mythology, and will inevitably produce an intense dislike for what might be under other circumstances an extremely interesting and useful study. With regard to the thesis, we need only point out that this had been tried for sixteen years, and was then abandoned, and we see no reason to regret its discontinuance. "Scientific research" of any value is not forthcoming, because a thesis must be written against a given date. All valuable scientific work is done under other conditions, and we tremble at the prospect of the large increase to our present huge stock of immature hypotheses and imperfect observations which such a regulation would necessarily entail. Indeed, it seems to us that the primary object of the medical curriculum and the purpose of the examinations of the University should be to furnish as large a number as possible of *clinical* physicians, rather than scientific workers. If they can be conjoined, as we frequently see in some of the most eminent members of our profession, so much better is the outcome, but we must insist on the science being subordinated to the clinical medicine. The only change that, in our opinion, is really needed is the extension of the practical part of the examination on the pathological and clinical sides. More time and more opportunity should be given to the candidates, so that they may show that they possess a thorough practical familiarity both with the scientific basis on which medicine has been built up and the every-day application of the details of the art. We might urge many pleas for the retention of Logic and Moral Philosophy. The accuracy of reasoning which is compelled by a study of Logic is not too commonly found even in eminent physicians and surgeons; and Mr. GLADSTONE'S plea for Philosophy, in his rectorial address, is so very recent, and was so very forcible, that we must beg the Senate not to decide hastily on its expulsion from the programme of the medical examinations.

Annotations.

"Ne quid nimis."

GUY'S HOSPITAL.

THERE is every reason to believe that the cloud that has been hanging over Guy's Hospital will disperse forthwith. For some weeks the relations between the medical and surgical staff and the governing body have been strained, in consequence of certain changes in the nursing proposed to be instituted by the recently appointed matron. The treasurer having given an assurance that any changes that may be introduced will not be allowed to interfere with the operations of the honorary staff or with the facilities of students for clinical work, the matter will now doubtless end.

INVALID CARRIAGES.

THE inclement weather of the past few weeks has again drawn attention to a want greatly felt on many of our chief lines of railway, especially those leading to our southern health resorts. Invalid carriages are, it is true, procurable on all lines, but at a considerable expense, and are only available for first-class passengers. Now, there is a large class of invalids travelling, say to Hastings, Bournemouth, or Torquay, who may not be ill enough or rich enough to require a whole saloon-carriage or compartment to themselves, but who are sufficiently delicate to render it imperative that all the windows should be closed. Now, such a person travelling in an ordinary carriage cannot ensure this immunity, for it may chance that some exceedingly robust and healthy individual has possession of the window-seat, and insists on keeping the window at least half-down. But supposing courtesy and remonstrances succeed in getting all the windows closed, it is not a pleasant or wholesome thing for the healthy to be shut up in a carriage, breathing and rebreathing the same air with a consumptive patient, even if the sufferer is not troubled with copious or offensive expectoration, in the long journey from London to Bournemouth or Torquay. We do not ask that invalid compartments be assigned to every train, but we urge that a compartment of each class might be set aside for invalids in one train at least daily. Both invalids and the ordinary passengers would benefit by the concession, and we are sure the railway company that adopted it would also gain, for it would weigh greatly with the medical attendant in selecting a health resort that the journey could be accomplished with ease and little risk of exposure to the patient.

BADER v. GORDON.

THIS case, which was concluded on Monday last, before Lord Coleridge and a special jury, in the Common Pleas Division of the High Court of Justice, calls for a passing notice. It was an action brought by Mr. Bader, ophthalmic surgeon to Guy's Hospital, to recover the sum of twenty-two guineas for operating for cataract on the defendant, who is a barrister practising at the Chancery Bar. The defendant made a counter claim for damages in consequence of the injury done to the sight by the operation, which he alleged had been performed unnecessarily, unskilfully, and without his consent. Mr. Power, of St. Bartholomew's Hospital, and Mr. Higgens, of Guy's, were called for the plaintiff, and Mr. Bowman and Mr. Critchett for the defendant. The usual lamentable and humiliating conflict of opinion resulted. It seems that on June 1st, 1875, Mr. Gordon applied to Mr. Bader for advice respecting the sight of his left eye. Mr. Bader examined the eye with the ophthalmoscope, and although he expressed no opinion to the defendant on the nature of the mischief, he feared there might be a detachment of the retina, and in his case-book there was an entry, "Left eye—query blind? No reflex light." Atropine was ordered, and the eye was looked at again a week later. It was then concluded that the retina was not detached, but there was an ordinary cataract, which was curable by operation. On the 12th of the same month Mr. Bader performed iridectomy, and on the 23rd he "needled" the cataract. After this the evidence becomes hopelessly involved. Mr. Bader declared that he did not see the defendant again until March, 1878, whereas the defendant affirmed that he visited Mr. Bader several times during the year 1875, and once or twice in 1876. Both parties agreed as to the visit in March, 1878. The cataract was then well marked, and after an unfriendly interview with Mr. Bader, the defendant sought the services of Mr. Bowman and Mr. Critchett. These gentlemen concurred that iridectomy was an appropriate and common operation as a preliminary to the other operations for cataract, and that the operation in this instance had been skilfully performed. It was, however, part of the defendant's contention that the lens had been wounded during the performance of the iridectomy. Mr. Bowman and Mr. Critchett both affirmed that the state of the lens was consistent either with a wound to the lens in the course of the operation of iridectomy, or with partial needling; and they said that the signs of this needling were in an unusual part of the lens, and one in

which they themselves would not have used it. As to the alleged impairment of sight resulting from the operation, Mr. Bader stated that the needling should have been repeated, and then absorption would probably have gone on and a cure resulted. In this opinion he was supported both by Mr. Power and Mr. Higgins. Mr. Bowman, on the other hand, had made an observation in his note-book—"If my case, I should extract, not needle"; he further stated in evidence that he believed Mr. Gordon's cataract might now be removed with success. Mr. Critchett agreed with Mr. Bowman respecting this preference for extraction, but he took a less hopeful view with regard to the future, inasmuch as he considered he could do the defendant no good, and might possibly do him harm. The jury found a verdict for the plaintiff for £23 2s., and against the defendant on the counter claim; and they appended a rider that they were of opinion that Mr. Bader did not sufficiently explain to Mr. Gordon the operations he was about to perform before he performed them. The defendant, who conducted his own case, then asked that the judgment for the plaintiff should be without costs. Lord Coleridge took time to consider this. On the following day his lordship said he should allow costs. He thought the verdict of the jury, upon the evidence before them, perfectly right, and that, with the materials before them, they could not come to any other conclusion. Mr. Bader may be congratulated on the result. We are by no means disposed to enter into all the details of this unpleasant case. One or two questions do, however, call for answer. Is there really so much doubt or uncertainty as to whether a confessedly traumatic cataract in a young person should be removed by needling or by extraction? Is ophthalmic surgery so uncertain that an experienced surgeon is unable to say whether in an apparently simple case of cataract he is likely to do good or harm by operating?

THE NEW GERMAN "CURE" FOR PHTHISIS.

FOR some few weeks past the German medical press has been discussing a new "cure" for phthisis, and accounts, more or less accurate, of the method and its benefits have found their way into the daily and weekly papers both on the Continent and in this country, and have excited a considerable amount of attention. It is thus described in a letter from Dr. Kroczak, the assistant to Professor Rokitansky, of Innsbrück, who has been treating the consumptive patients in his wards by the new method, and, it is said, with results that have far surpassed his expectations; but as yet no definite statistics of the cases and their course have been published:—"Natrium benzoicum—one pro mille of the bodily weight, diluted to a solution of 5 per cent.—is inhaled twice a day, in the morning and evening, by means of a well-acting 'Siegle's pulverisator,' without interruption during seven weeks. Besides, the appetite, which will show itself soon, is to be fully satisfied by a meat-diet, and fresh air and prevention of all enervating influences are to be ensured." The remedy, therefore, is simple enough. A 5 per cent. solution of benzoate of soda is to be inhaled twice daily for seven weeks by means of a Siegle's atomising inhaler, in the proportion of 1 part of the salt to a 1000th of the body-weight. The quantity necessary for a patient 140 lb. in weight would therefore be about 2¼ oz. at each inhalation; and the inhaler must be carefully adjusted for such a large amount to be taken into the air-passages. A certain proportion will always escape into, and permeate the air of, the room, and the patient should remain therein for an hour after each inhalation. We can easily understand that inhalations of benzoate of soda may be of some benefit in checking the formation of mucus or pus in bronchiectatic and even in phthisical cavities; in fact, the old Friar's balsam has long been, and is still, frequently employed with advantage for this purpose. This, however, is not the result that is to be secured by the new "cure." The benzoate of soda is supposed to destroy the specific bacteria to which the tuberculising process is due, and then the common inflammatory changes lose their destructive characters and slowly heal. The facts on which such a theory can be based are almost entirely wanting, and few pathologists, in this country at all events, will be found to give in their adhesion thereto, whatever may be the results of the treatment. We should, however, say that the theory has the support of so distinguished a scientist as Professor Klebs, of Prague, and that Dr. Max Schneller, a "privat-docent" in the University of Greifswald, is stated to have failed in inducing tuberculosis in rabbits that were kept for several hours daily in a box which had been filled with these benzoic vapours, although these animals are, as is well known, very readily infected with this disease. We hope that this treatment may be employed in some selected cases of phthisis, in different stages, so that we may have some trustworthy data on which to found definite conclusions as to its real value. Meanwhile we can only say that *à priori* it seems to us more likely to benefit chronic cases of phthisis with profuse expectoration than those in which true tuberculosis is taking place. It is necessary to add that benzoic fumes are extremely irritating, so that they would be contra-indicated in all cases where there were any signs of irritation in the throat, larynx, and larger bronchi, and that when the vapours are being inhaled, even in the most chronic cases, or in healthy subjects, very distressing cough is likely to come on; and we doubt if many patients will be able to breathe such a large quantity as we have mentioned. Moreover, at present, sodium benzoate is very expensive.

THE ANTI-VACCINATION PARTY AND SIR THOMAS WATSON.

THE anti-vaccination party threaten to estrange all ordinary people by their unfairness as well as by their intellectual defects, which amount to a kind of blindness. There is no device too disingenuous for them to take advantage of if it makes in favour of their crotchets. One of the worst practices they have is to take a few words of a paper written by an eminent man out of their connexion and make him appear a supporter of their views, while the paper, as a whole, is strongly against them. This is a shift to which honest people would not have recourse. But it is the common practice of the anti-vaccination party. Here is a specimen, in exposing which we only do justice to the eminent medical Baronet whose authority is distorted.

In a handbill, headed "Opinions on the Vaccination Laws," the following is quoted from Sir Thomas Watson, Bart.:—

"I can readily sympathise with, and even applaud, a father who, with the presumed dread or misgiving in his mind, is willing to submit to multiplied judicial penalties rather than expose his child to the risk of infection so ghastly (as syphilis)."

The passage occurs in a paper in the *Nineteenth Century* for June, 1878, on page 1006, and, standing alone, would seem to imply that Sir Thomas was with the anti-vaccination party. How untrue this is may be gathered from another sentence in the same paper:—

"It must be obvious to an unprejudiced mind that the facts already stated warrant and demand that the early vaccination of children should be made, *by force of law*, compulsory upon their parents and guardians."

Sir Thomas's object in the paper is to advocate the public practice of animal vaccination as an alternative to arm-to-arm vaccination—not to abolish the vaccination laws. The anti-vaccination party may rest assured that the candour and honesty of the scientific witnesses in favour of vaccination will only enhance the case against those who are unfair

enough to distort the evidence of such witnesses, and blind enough to be unable to see its force.

A CHRISTMAS APPEAL ON BEHALF OF HOSPITALS.

AT a time when kindly people are devising kindly things, we would venture to say a word on behalf of our hospitals. It is not realised how great a number of sick and maimed in this deadly winter time are being housed and healed in them, with a tenderness of nursing and medical care beyond all praise. Still less realised is the weight of care which presses on the Boards and House Committees which have to administer these anxious and responsible charities. This ought not to be so. The evil is wrought by want of thought and not by want of heart. Nevertheless it exists, and it ought not to exist. There are thousands of sick and maimed people who might be set right for the winter by admission for two or three weeks into the wards of a London hospital, for warmth and food and medical care, but who at the present rate of charity will not get in, but will very likely get into their graves before the spring appears. The hospitals cannot admit them for want of money. We should be ashamed to say how many beds in London hospitals are unutilised for want of funds. It is absurd to suppose that a rich community can discharge its obligations to the sick poor, and to those kind and able men who administer hospitals, by annually dropping a shilling or a sovereign into the Hospital Sunday collection. A word to the kind, especially at Christmas time, is enough. If poverty is a claim at such a season, poverty *plus* sickness is an irresistible one.

THE MEDICAL SOCIETY OF LONDON.

AN interesting and remarkable display of microscopical preparations, illustrative of spinal cord disease, took place at the Medical Society on Monday last. To Dr. Gowers the Society was indebted for the exhibition, which may fairly be said to have been unique of its kind. There was hardly a point in the known pathological histology of the spinal cord that was not here shown, the number of specimens exceeding seventy. It will be seen from the report that the exhibiter described to the meeting the points illustrated by the preparations, his description being aided by diagrams. The Medical Society has done well in setting apart one evening in the session to such a useful purpose as this. Last year, it will be remembered, Drs. Tilbury and Thomas Fox exhibited microscopical preparations of diseases of the skin. The utility of these meetings is obvious, since they allow many to make themselves acquainted with the essential features of diseased structures who would not otherwise enjoy such an opportunity. In every way the plan has met with success, and nothing could well be more successful than last Monday's demonstration.

KIND INQUIRIES.

AMONG the many burdens society imposes, none is more grievous than the "kind inquiries," made not only by numerous relatives and intimate friends, but by a whole host of acquaintances—on other occasions indifferent neighbours—in times of severe illness. At a season when the whole resources of the household are severely taxed to meet the demand made on them for additional attention and labour, and when the house should be kept as quiet as possible, it is quite one servant's duty to attend to the door and give a satisfactory answer to the numerous callers. Indeed, the immediate attendants on the sick may consider themselves fortunate if some of the more importunate do not force their way to the drawing-room, and make demands on patience and strength already overstrained. Each post, too, brings piles of letters requiring at least a few lines in answer if dire offence is to be avoided. Should the invalid be a person of consideration, then it is deemed a mark of social distinction to have the very latest intelligence from the sick room, and the physician or practitioner is bothered with inquiries, oftentimes with letters, asking for the latest news. The inquirers forget that it would be a breach of confidence on the medical man's part if he were to disclose any particulars of an illness except to the very nearest relatives. Only those who have been through the ordeal can fully estimate the additional labour and trouble these well-intentioned but ill-timed inquiries cause. Surely to drop a card called "kind inquiries" into the letter-box, and read the bulletin left in the hall, if the case be really a very severe one, ought sufficiently to fulfil all social requirements.

THE MIDDLESEX HOSPITAL.

ANOTHER vacancy has been created in the medical staff of the Middlesex Hospital by the resignation this week of Dr. E. H. Greenhow, F.R.S., senior physician, in order that he might the better meet the increasing demands of private practice. Dr. Greenhow's name has been long and honourably connected with this hospital and its medical school. In the latter he was for many years Dean, subsequently Treasurer, and is at the present time Chairman of the School Committee, in all of which offices his well-known managing qualities have been much appreciated. He was also at one time Lecturer on Forensic Medicine, and then on Medicine, in the School. It cannot but be with feelings of great regret that his colleagues part with so valued and esteemed a coadjutor, who spared himself no pains in the labour in which he was engaged. At the close of his clinical lecture on the 5th inst., Dr. Greenhow took the opportunity of intimating his intention to his class, and conveying to them some valuable practical hints as to the pursuit of clinical study, and the mode in which they might best fit themselves for success in after-life. He insisted upon early and close attendance in the wards, maintaining that much practical and useful knowledge was gained almost insensibly, and could not be too early sought after. And he further inculcated principles of consideration and humanity in their dealing with the sick. These remarks, which were given with much earnestness and feeling, were followed by the class with great attention; and at the close they gave Dr. Greenhow a hearty ovation.

PHILLIPS v. THE SOUTH-WESTERN RAILWAY COMPANY.

IN spite of two decisions against them, the South-Western Railway Company will, it is said (application for a new trial in the Common Pleas division having been refused), carry this case before the House of Lords in the hope of getting a mitigation of the damages. Such a result seems in the highest degree improbable, and in the present state of the law the damages awarded must still be regarded as inadequate, for they are in no sense a compensation for the loss of income. We sympathise very sincerely with Dr. Phillips in the harassing delay to which he has been subjected, a delay which would be trying to a man in robust health, and doubly so to one in Dr. Phillips's position. On public grounds, however, we do not regret the action of the railway company, since by making this case notorious they will probably bring about a formal consideration of the important question of damages in cases of injury, and it is possible that some legislation on the matter might make the settlement of "railway" and similar cases easier than at present. The judges have hitherto failed to give the slightest clue to any scientific "principles" upon which damages might or ought to be assessed, and the public and their legislators are placed in this dilemma, that while, on the one hand, railway

companies and others ought to be made to smart for negligence or carelessness, care should be taken that the damages awarded are not such as might in conceivable cases be so heavy as seriously to discourage enterprises, such as railways, which are a great boon to the public. In the matter of damage to goods, a special rate is charged for articles of special value, and we do not quite see why human beings of special value should not be treated in a similar way provided the average value of human life and health were placed sufficiently high.

ENTERIC FEVER IN SWANSEA.

IN the course of August of the present year enteric fever in Swansea underwent a very considerable development. Dr. Eben. Davies, the medical officer of health, in a special report upon this development, shows, from inquiry among the medical men practising in Swansea, that 96 cases occurred in the first week of August, 183 in the second, 179 in the third, the number declining to 79 in the fourth week, and to 26 in the fifth week of the outbreak. Thus a total number of 563 attacks was ascertained to have happened during the five weeks referred to; but to this number Dr. Davies is of opinion that 50 should be added, making a total number of 640 cases occurring in the months of August and September, among a population estimated at upwards of 60,000. The deaths from fever registered in the several weeks respectively of August and September were 0, 4, 13, 11, 14, 4, 4, and 7. The disease was very widely distributed in the town, but there were certain local limitations which appeared to give a clue to the source of the outbreak. This is assigned partly to certain defects of sewerage exaggerated by heavy rainfall, and partly also, but more generally, to pollution of the town's water-supply. It is stated that heavy rainfalls had exposed the reservoir, from which the town's supply of water at the time of the outbreak was obtained, to a danger of pollution, the existence of which had not apparently been recognised before—namely, the flushing of certain farm and excremental refuse into the reservoir. The evidence, unfortunately for the completion of the story, halts at this point.

UNIFORM OF OFFICERS OF THE ARMY MEDICAL DEPARTMENT.

THE following alterations in the uniform of the Army Medical Department have been approved, and will be published in the next Army Circulars:—

Forage Cap.—For Surgeons: Blue cloth with band of gold lace 1¾ inches wide, with two narrow stripes of black silk woven therein; gold and black pearl button, and gold and black braided figure on the crown. Peak, black leather, sloping. For Surgeon-Majors and Brigade Surgeons: The same, but with embroidered peak.

Patrol Jacket.—Blue cloth, as for Infantry, but with a stand and fall collar, edged with inch black mohair braid, and a false upright collar of black cloth with one row of gold Russian braid round the top, to button on inside collar of jacket. Badges in gold will be worn on the stand and fall collar.

Pouches.—On State occasions and at balls the gold embroidered pouch will be worn. On all other occasions the new pattern black field pouch, containing instruments, will be worn, attached to the gold embroidered pouch-belt by gilt swivels. The undress plain black belts will be discontinued for all ranks.

Brigade Surgeons will wear the frock coat as for a Deputy Surgeon-General, but the badge of rank will be a crown; in other respects their uniform will be that of Surgeon-Major.

Probationers will wear the undress uniform of a Surgeon, but without the sword.

THE HOSPITAL SATURDAY FUND.

IT is so far satisfactory to notice that the amount of the Hospital Saturday Fund this year exceeds by about £50 the amount raised last year. Of this sum (about £6550) £5250 will reach the medical charities, and £1300 will be absorbed in working expenses. The only satisfactory thing about this large working expenditure is that it is 25 per cent. less than last year. Mr. Samuel Morley, who presided, and others managed very adroitly to give a new and more modest form to a motion that had been passed at a previous meeting of the Council of the Fund to claim representation in the governing bodies of the charities receiving awards. A resolution was passed averring that the council was entitled to the privileges of subscribers to such charities. The Royal Ear Hospital was reported at the meeting—held, by the way, at King's College Hospital—to be disqualified for the reason that, as the total expenditure had been £417 and the contributions of patients £319, the patients had virtually paid for the relief afforded. We must again, though very reluctantly, express our disappointment at the comparative failure of this movement. As a representation of the interest of the working classes in the hospitals of London it is most discouraging, and contrasts very unfavourably with the sums spent on beer.

BROWN PAPER AGAINST THE COLD.

THE "old woman's" remedy for a "cold on the chest," a sore-throat, or a bruise, which consisted in an application of brown paper steeped in beer or vinegar, owed its efficacy to the heat-retaining properties of the paper. A wet pad of this material, so far as the surface next the skin was concerned, acted almost as well as a layer of wet linen-rag protected with a thick covering of flannel. In short, stout paper of the commonest sort is an effective non-conductor, and may be most advantageously employed as covering for beds or to eke out scanty clothing. If this were generally known among the poor, strong sheets of thick paper would be stitched to the back of ragged quilts, with the result of rendering many a poor family comfortable because better protected from the bitter weather of these winter nights. A piece of thick paper inserted between the lining and the cloth of a waistcoat, or in the back of a thin coat, will render it warm as well as light. The suggestion is a small one, but it is simple to carry into effect, and will be found effective.

RUSSIAN MEDICO-SANITARY NEWS.

IT is proposed to erect two monuments to the Russian medical men, pharmaceutists, and health officers who lost their lives during the recent Russo-Turkish war. The commission charged with the duty of preparing these monuments have requested the medical departments of the Ministry of War and of the Interior and the Red Cross Society, to favour them with a complete list of names of individuals in the above categories who fell on the field of battle. The subject of the frightful extension of diphtheria in Russia has been occupying the attention of the Public Health Society of St. Petersburg; also the question whether children are not taxed beyond their powers in the instruction given in the public schools. The Society has moreover been recently giving attention to the subject of the public cleansing of St. Petersburg, and the indifferent sort of food supplied to students and the necessitous population by cheap cooking-houses. With reference to the spread of diphtheria, the Red Cross Society has appointed a commission to study the subject, and has asked from the Government for an authorisation to establish a subscription throughout the Empire to enable it to give assistance to infected districts, and for an immediate advance of 105,000 roubles for the purpose of organising a sanitary

service in the zemstvo of Poltava, the zemstvo having provided 100,000 roubles towards the same object. Ten sisters of charity have been sent from Odessa to Temirkhanschowra to give aid in the hospitals established there for the sick and wounded of the Russian trans-Caspian expedition. The Red Cross Society, moreover, has added 10,000 roubles to the sum of 30,000 roubles granted previously for the sanitary service of the expedition, and is about to transmit to the troops a considerable amount of "medical comforts." Dr. Présbrajensky telegraphs from Tchekischliar that there are 100 sick in hospital there. It is proposed to establish an asylum for the blind in St. Petersburg in memory of Dr. Robert Lessig.

THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

ONE of our evening contemporaries, in the course of the week, announced the resignation of the medical officer of the Local Government Board, Dr. E. C. Seaton. We have made inquiries as to this matter, and find that, although Dr. Seaton's illness is so serious as to give rise to doubts whether he will ever be able to resume his official duties, he has not resigned.

STRAY DOGS IN CABS.

OUR attention has been called to a curious cause of fright which admits of easy remedy. During the cold dark evenings stray dogs are apt to take refuge in cabs left unguarded on the stands. They will slink upon or under the seats, and a passenger getting in hastily does not become aware of the presence of an intruder until a warm body is felt to move. It is easy to see how this may startle a sensitive person. It is even possible, if, as happened on a recent occasion, the animal refuses to be ejected, there might be danger of a bite.

RECEPTION OF OFFICERS AT WINDSOR.

WE are glad to note the presence of two Army Medical Officers, Deputy Surgeon-General John Hendley and Surgeon-Major Charles M. Cuffe, at the installation of "the Order of the Bath," on Monday last, by Her Majesty the Queen, at Windsor Castle. The value of the C.B. conferred for distinction and good service in the field is enhanced by its personal reception at the hands of the Sovereign.

THE THAMES VALLEY SEWERAGE BOARD.

LOCAL journals comment on the increasing friction which appears to be showing itself in the work of this unfortunate board. Internal disagreements are reported as interfering with its labours, and a tendency to disintegration is noted. Let us hope, however, that, in view of the difficulties surrounding the board, these are but passing troubles, and that happier feelings will obtain sway as Christmas draws near.

IT may be interesting to our readers to know that Colonel Leet, who on Tuesday last received the Victoria Cross from the hands of the Queen for saving the life of a brother officer under circumstances of extraordinary difficulty and danger, and after he himself was seriously injured, was at one time on the eve of entering the medical profession, and was for three years a pupil at the Richmond Hospital, Dublin; but, just as he was about to qualify, he was offered a commission in the army and accepted it.

ON the 3rd inst. an address was presented to Dr. Charles Benson, of Dublin, on the occasion of his portrait being handed over formally to the board of directors of the City of Dublin Hospital, of which he was one of the original founders. The address referred to his untiring zeal in the interests of the hospital with which he had been connected since 1842, which had led a few of his friends to record their sense of the value of his services by placing his portrait in the board room of the hospital. He had laboured by every means to bring the hospital to an efficient condition, and his numerous friends trusted that he would be spared for many years. The portrait is a copy of one in the College of Surgeons, of which he is an ex-president.

WE would remind our readers that the adjourned discussion on Antiseptic Surgery will be held at St. Thomas's Hospital (Westminster Bridge entrance), on Wednesday, December 17th, at 8 P.M., John Wood, Esq., F.R.S., President of the Metropolitan Counties Branch of the British Medical Association, in the chair.

WE are authorised to state, that during the ensuing summer a student's garden will be thrown open in the Royal Gardens, Kew, when students will be permitted, under certain regulations, which will be drawn up hereafter, to procure botanical specimens for scientific study and observation.

THE deputy medical officer of health for Penzance, Mr. John Symons, reports the low death-rate of 10·54 per 1000 population of that borough during the September quarter.

THE PARKES MUSEUM.

No. II.

INVALID APPLIANCES.

THE second issue of the catalogue of this Museum, which has been forwarded to us, contains many additions, and is much more complete than the first issue. Purchasers will be glad to find in it a record of the speeches which were made at the opening ceremony in June last by Mr. Cross, Lord Cranbrook, the Duke of Northumberland, Sir William Jenner, Professor Huxley, Cardinal Manning, and others, and they will feel encouraged by the statement of the Home Secretary that his sympathies are entirely with the promoters of the institution, and that his determination is to help it whenever opportunity occurs. Subscriptions, owing doubtless to the bad times, have not come in so readily as they should have done, and at present we do not see upon the list of subscribers the names of any of the great building firms of London, who certainly should support such a museum.

Efforts have lately been made (mainly at the instigation, we believe, of Dr. Steele, of Guy's Hospital, one of the Executive Committee) to increase the number of articles intended for the relief of the sick, and for rendering the sick room at once wholesome and convenient. A large number of articles designed for the purpose have already been received, and we doubt not that they will be considerably increased when manufacturers become more generally aware of the intention of the Executive Committee to make this one of the prominent features of the museum. Certainly no class of objects will have more interest for our readers, and therefore we propose describing in detail some of the most useful among them.

The "Excelsior" Hospital Bedstead and Mattress, which is the invention of Messrs. Chorlton and Dugdale, of Manchester, consists of an ordinary iron bedstead fitted with a spring mattress composed of iron chains joined at intervals by spiral springs. These mattresses are little liable to get out of order, and their construction is so simple that their repair, in case of necessity, can be easily effected. The initial cost is not great, and no palliasse is required. It shares with all other metal mattresses the advantage of

being little liable to harbour infection, and of being easily cleansed.

The patent Water- or Air-bed, manufactured by Pocock Brothers, is a most ingenious contrivance, consisting of a number of cylinders made of vulcanised indiarubber, which can be filled with water or inflated with air as desired. These cylinders lying side by side form a mattress which is said to possess all the advantages of the ordinary water-bed, as well as that claimed for the "block" fracture beds which are so common on the Continent—viz., that by withdrawing any one of the cylinders pressure can be removed from the under surface, and thus the chance of bedsore be lessened or entirely obviated. By removing a cylinder the use of the bed-pan is much facilitated, as well as the subsequent cleansing of the patient. This is certainly a well-intentioned invention. Whether or not it practically fulfils its design can only be determined by long experience.

Mr. Thomas Allen, of Bristol, has sent a bedstead and a child's cot, in which the support for the mattress is formed of simple laths made of pitch-pine. This arrangement has the advantage of being economical and exceedingly simple. The laths have a certain amount of elasticity which is appreciated by the occupant of the bed, and they can be easily removed and scrubbed when the necessity arises. Wooden apparatus, if jointed, is very apt to harbour vermin, but this objection does not hold good in the case of simple laths, which afford no cover for parasitical insects. Laths, too, have no crannies in which dust may settle out of sight and out of mind; and in this respect they offer a contrast to some of the mattresses made of wire, from which it is very often difficult to dislodge the dust, which accumulates in the turns of the wire and the twists of the spiral springs. Allen's bedsteads are tubular, and are provided with a movable footboard and a curved iron rod, springing from the head of the bed, to which the bed-pulley is attached. The child's cot is provided with a sliding tray, now a familiar adjunct to all children's hospital cots. The mechanism by means of which one side is enabled to be folded back, to allow the nurse or doctor to get to the patient, is simple and effectual.

Nothing adds more to the comfort of an invalid than a good bed-rest, which enables him to be securely propped up in bed to take his meals, to read or write, or otherwise to amuse himself. A bed-rest should be light, so that a nurse can easily place it in position and remove it; it should be so arranged that the angle at which it is fixed is not liable to shift, and the material of which it is made should be such as is not prone to harbour vermin or infection. These latter qualities are quite as important in a bed-rest as in a bed, and perhaps more so, for the former is more likely to be shifted from one patient to another, or to be used by a succession of patients, without being either cleansed or disinfected.

When a patient uses a bed-rest, he is very apt to slip down in the bed; and this inconvenience, which is consequent on their use, has been well met by Mr. Newton Nixon, the secretary of University College Hospital, who has contributed to the museum a bed-rest of his own contrivance, which is fitted with a footboard, attached by strips of webbing to the sloping back of the apparatus, so that when the bed-rest is used the footboard can be adjusted to the patient's length, and thus his fixity in one position be secured.

The bed-rest in use at Guy's Hospital, which is among the contributions made by Dr. Steele, has a wicker-work back, and is admirably simple and portable. Its angle is maintained by an iron arc and a pin.

The bed-rest which Mr. Allen has devised for attachment to his hospital bedstead consists of a cast-iron framework, fitting by means of clamps to the frame of the bedstead. The angle desired is securely maintained by means of an iron arc running over a catch, which is screwed tight by the aid of an attached lever. The "rest" against which the patient leans is made of striped canvas.

Messrs. Chorlton and Dugdale exhibit a bed-rest and an invalid couch, which they stile the "Matlock." These are fitted with a patent elastic backing and seating, composed of flattened spiral springs radiating from a centre, and fixed by their peripheral ends to a light wooden framework. This arrangement secures a large amount of comfort for an invalid, in providing for him a yielding and elastic support. The bed-rest is very light and portable, and the couch is in three sections, any one of which can be fixed at any desired angle, so that a great variety of positions is attainable by the occupant. It has a further advantage in being capable of folding up so as to occupy a small compass.

Dr. Steele has contributed a large assortment of articles in Pottery designed for sanitary purposes and for use in the sick room. These are manufactured by the well-known potters, Messrs. Copeland. Many of the articles are familiar in pattern, and the round-bed pans, bed-urinals, bed-slippers, spittoons, and feeders, need only to be mentioned. The hospital dressing-pans, which are of a triangular or squarish form, with corners drawn out, are admirably suited for the purpose for which they are intended, since the projecting corners and curved sides readily accommodate themselves to the contour of the body, and allow of the cleansing of receding parts of the body without soiling the bed. The excellent bed bath, made of white porcelain in slipper form, and named the "Queen Charlotte," would certainly prove of service to many a lying-in woman and bed-ridden invalid. There are also an "hermetically sealed" (with water) chamber-vessel and chair-pan, for the preservation of stools for medical inspection. There is a handy nursery-lamp also, in white ware, for warming food, &c.

It is a point very much open to question if anything like real disinfection can be effected by means of the vapour of a volatile disinfectant in such a state of dilution as to be respirable without harm. There can be no doubt, however, of the occasional benefit derived by sufferers from pulmonary complaints from inhaling an antiseptic atmosphere, one which at least will check and hinder, if it do not entirely prevent, putrefactive changes. There are two appliances in the museum for charging the atmosphere of a room with an antiseptic vapour. One, which is contributed by Dr. Steele, is well known, and consists merely of a miniature "round towel," circulating on two rollers, the lower of which rests in a trough filled with a solution of carbolic acid or any other soluble disinfectant. By merely pulling one side of the towel, a freshly moistened piece is easily raised from the trough, and thus a large and easily renewable evaporating surface is provided, and the dissemination of the vapour greatly facilitated.

The "Hygienic Tar Apparatus" is contrived to fulfil a purpose very similar to that of the last mentioned, but is very different in appearance. It consists of a metal box filled with Norwegian tar. The lid of the box is provided with metal laminæ, which are immersed in the tar. When the apparatus is used the lid is raised, and the tar-covered laminæ are exposed to the air, and the pleasant odour of the tar is very quickly perceptible at a great distance from the apparatus. A tube is fitted to the box which enables it to be used as a simple inhaler, and, on applying the mouth to the end of the tube when the box is closed, and drawing an ordinary breath, a very perceptible dose of the tar-vapour is obtained. This machine is the invention of Mr. A. E. Alt, a Swede, and is not unlikely to become a popular therapeutic agent.

The only Bed-screen shown is a model of the one in general use at Guy's Hospital. This consists of a simple wooden framework like the old-fashioned hinged linen-horse, and over this a neat calico cover is slipped. The cover can be, and is, regularly washed with the rest of the ward linen.

A model of a Coal-box for hospital wards, devised by Dr. Steele, strikes us as being a most admirable contrivance. The coal-box is made to serve the purpose of a settee, and with this view the lid is fitted with a back and ends and is provided with a mattress and cushions. The coal is reached through an aperture at either end, which is closed by a sliding lid. The unsightliness which seemed almost inseparable from a big coal-box is in this way completely obviated, and a piece of furniture is provided which adds very materially to the comfort of the patients. These coal-boxes should become general in hospital wards.

An apparatus called a "Mesopodium," designed by Mr. Twining, of Twickenham, is likely to be of great service to patients suffering from chronic paraplegia. These patients often live for years, and enjoy perfect health with the exception of their inability to walk or stand upon the legs. They get about upon crutches, and their legs are often just sufficiently useful to allow them to shift the position of the crutches, and so perform their necessary locomotion. Once upon their crutches, however, they experience great difficulty in getting rest, since sitting down or rising from a sitting posture is a serious business, and not lightly to be undertaken. The mesopodium is a light wooden support,

provided at its upper end with what is not unlike a small model of a military saddle. This fits into the perineum, and is maintained by a very slight adduction pressure of the thighs, if indeed the mere weight of the legs be not sufficient to maintain it *in situ*, while the patient is "walking" on his crutches, the length of the apparatus being such that during "walking" the lower end just clears the ground. When the patient desires to rest, he merely settles down upon his mesopodium, and is then provided with a seat not unlike those seats which lazy sportsmen in the present day carry with them when they go out shooting. The lightness and elegance of this contrivance are most praiseworthy, and instrument-makers would do well to inspect it.

Mr. Twining, in addition to his numerous other contributions, has sent an ingenious contrivance for enabling persons with very weak eyes—a condition approaching blindness—to write with comparative ease. It consists of an ordinary writing-slab, the left-hand border of which is fitted with a wooden edge notched at equal intervals on its inner side. A slab of wood like an ordinary T-square forms a rest for the hand, passing horizontally across the page, while the cross-piece fits over, and can be made to slide along the wooden notched edge-piece. The writer feels for the notches, and brings the upper border of his T-square in contact with each successively, moving it gradually downwards as he fills his page. He is thus enabled to keep the lines of his writing absolutely horizontal, and to maintain an equal distance between each of his lines. The apparatus is provided with black paper, because, in Mr. Twining's experience, it is less trying for a person with weak eyes to write with chalk upon a black substance, than to follow the ordinary custom of using black ink and white paper.

Mr. Twining also exhibits an inexpensive contrivance for converting an ordinary chair into a carrying chair for taking invalids up and down stairs. Two cross-bars, one beneath the seat in front and another behind the back at a higher level, are united by means of two parallel bars, running obliquely, which form the handles. The apparatus can be made for a few shillings, and seems to answer the purpose almost as well as the carrying chairs which are specially constructed.

The well-known Portable Vapour Bath, Bronchitis Kettle, and Hot-air Bath, made by James Allen and Son, of Marylebone-lane, need only to be mentioned, as our readers are perfectly familiar with the apparatus manufactured by this firm, and their utility is well recognised by the profession.

Messrs. Faraday and Son have contributed a Gas-bracket, contrived a "double debt to pay," which promises to be most acceptable in the sick room. It is provided with two burners, an ordinary one for light and a "Bunsen." Over the latter is an adjustable arm, which will support a kettle, and thus boiling water may be obtained as rapidly, or nearly so, as upon a fire. This arrangement has the advantage of not being in any degree unsightly.

Liebreich's Reclining Chair, made by Messrs. Callaghan and Co., of Bond-street, is so designed as to accommodate itself to the natural curves of the spinal column, and thus to afford a maximum of support with a minimum of horizontalism. The idea is a good one.

Warner's Portable Watercloset is an ordinary night-stool provided with a water-tank, and so arranged that by using the handle as a pump the soil can be washed out of the pan into a trapped receiver beneath. It is likely to be of great service in the bedroom, when, in case of sudden need, soil is obliged to be left in the room all night.

PUBLIC HEALTH DURING THE PAST SUMMER.

THE Registrar-General has recently issued his Quarterly Return, containing the national vital statistics for the three months ending September. It appears that the public health, estimated from the prevailing rate of mortality, was as unusually satisfactory as the summer weather was unseasonably cold, wet, and sunless. The annual death-rate in the third quarter of this year was the lowest recorded in any quarter since the commencement of civil registration in 1837, and was equal to but 16·4 per 1000 of the estimated population. The nearest approach to so low a death-rate occurred during the cold and wet summer of 1860, when the rate was 17·2. The rate of mortality in the principal urban population was equal to 17·5 per 1000 last quarter, whereas in the remaining, or mainly rural population, the rate was so low as 14·7. Each of these rates was very considerably below the average rates in recent corresponding quarters, but by far the largest proportional decrease occurred in the urban death-rate, a result mainly due to the exceptionally small fatality of summer diarrhœa, which is an essentially urban disease. The mortality from all causes in England and Wales last quarter was 19 per cent. below the average mortality in the nine preceding corresponding quarters. The depression of the mortality was equal to 35 per cent. among infants under one year of age, to 15 per cent. among children and adults aged between one and sixty years, and was but 4 per cent. among persons aged upwards of sixty years. The exceptionally small fatality from diarrhœa during the past cold summer was the main cause of the low death-rate, and the marked decrease of infant mortality. The deaths referred to diarrhœa in England and Wales, which were 17,528 in the summer quarter of last year, did not exceed 4699 in the three months ending September last; indeed, the death-rate from this disease last quarter was little more than the quarter of the average rate from this disease in the nine preceding corresponding quarters. This remarkably low death-rate from diarrhœa was doubtless due in great measure to the low temperature, with frequent and abundant rain, which prevailed, with little exception, throughout the summer. It is satisfactory, however, to find that the fatality of the six other principal zymotic diseases was also the smallest on record for the corresponding quarter. Scarlet fever was, next to diarrhœa, the most fatal zymotic disease last quarter, and caused 3577 deaths, but its fatality, notwithstanding epidemic prevalence in many localities, was one-fifth below the average in the nine previous summer quarters. The fatal cases of whooping-cough were also considerably below the average, whereas those of measles showed a slight excess. The deaths referred to diphtheria differed but slightly from the average. The most marked decline, however, was in the fatal cases of fever and small-pox. The 1677 deaths from fever (principally enteric or typhoid) were as many as 1042 below the number returned in the summer quarter of 1878, and the annual death-rate from the disease was but just half the average rate that prevailed in the summer quarters of the nine years 1870–8. This marked decline in the fatality of fever affords undeniable proof of sanitary progress. Judged by this standard, which is in the main trustworthy, sanitary progress has been more evident in recent years in town than in country, and in large than in small towns. Only 79 fatal cases of small-pox were recorded in England and Wales during last quarter. So small a number of deaths from this disease during three months is without precedent since the commencement of civil registration. Of these 79 deaths from small-pox no less than 66 occurred in London and its outer ring of suburban districts; the other 13 fatal cases were scattered throughout England and Wales, including, however, 3 in Sudbury (Suffolk), and 3 in Holyhead. On the whole the mortality statistics for last quarter were unprecedentedly satisfactory, whether judged by the general death-rate, by the fatality of zymotic diseases, or by the rate of infant mortality. The low death-rate last quarter to some extent counterbalances the excess of mortality in the first two quarters of the year due to the unseasonably cold winter and spring.

ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the Royal College of Surgeons, held on Thursday last, the committee appointed, on the motion of Mr. Holmes, to consider the question of altering the curriculum with regard to anatomy and physiology reported that there were no circumstances calling for any alteration at present. The members of the Board of Examiners in Anatomy and Physiology were elected; all the old members were re-elected except Mr. Holmes, who did not seek re-election. Mr. B. T. Lowne was elected as an Examiner in Physiology. Mr. Curling tendered his resignation from the Court of Examiners, which was accepted. Mr. Gay's proposal to render members of the College eligible for examinerships in anatomy and physiology was rejected after discussion.

Correspondence.

"Audi alteram partem."

TYPHOID FEVER.

To the Editor of THE LANCET.

SIR,—With reference to the occurrence of cases presenting all the phenomena of typhoid (enteric) fever in other countries, I have received the accompanying communication from Dr. Grabham, of Madeira. I was not previously aware of the occurrence of disease in this form in that island. Possibly other medical officers practising abroad in tropical or sub-tropical climates may be able to confirm the opinion that fevers of climatic origin do occasionally present all the symptoms that characterise typhoid in this country.

I am, Sir, yours truly,

Dec. 4th, 1879. J. FAYRER.

Madeira, Nov. 16th, 1879.

DEAR SIR JOSEPH FAYRER,—I have read with much pleasure a report of your recent remarks on the etiology of typhoid fever.

In Madeira, where I have had much experience during the last eighteen years, there are present from time to time cases of typhoid whose origin is precisely that which you point out as referable to general and climatic causes. I have long ago convinced myself that it is vain to seek to trace many well-marked cases of pure typhoid to sources of filth contamination; though these latter abound in Funchal, our chief town, and are frequently associated with their own proper instances of fever.

The cases which I speak of as having the more vague etiology which you mention are those which happen almost every year to some extent, and chiefly in seasons unusually bright and sunny, in the persons of young, healthy *new comers*, who roam about to see all our mountain scenery, and succumb to attacks of genuine typhoid fever quite identical with the typhoid fever of filth, except, as you say, in origin. I have again and again seen such cases arise in situations many hundreds of feet above Funchal, far away from all dwellings, and in regions where the cold drinking-water springs from beneath basaltic columns of rock. It is quite certain, that, however they acquire it, nevertheless such patients, equally with those who have imbibed their disease from polluted water, are able to spread their infection to others.

I hope you may think this interesting enough to condone the intrusion.—Yours faithfully,

MICHAEL GRABHAM, M.D., F.R.C.P.

EXCISION OF THE HIP.

To the Editor of THE LANCET.

SIR,—Will you do me the favour of inserting in the forthcoming number [of THE LANCET the following brief reply to the annotation on "Excision of the Hip," which appeared in last week's issue?

My cases are forty-five in number; seventeen of these are absolutely "cured," and living at the present time. Twelve of them have promised to appear at the meeting of the Clinical Society on Friday evening next, December 12th; and I confidently hope to be able to show them there.

Six patients died in consequence of, or notwithstanding, the operation. Of this number three died of pyæmia, one of septicæmia, one of exhaustion and thrombosis (the operation coming too late), one of amputation at the hip for suppuration of the knee, following erysipelas of the thigh and knee, ten months and more after operation.

One child died of diphtheria of the air-passages. That death cannot be laid to the charge of excision.

Nine other cases ended fatally, *not* in consequence of the operation, but at the end of some length of time afterwards, varying from two months and a half to four years. Two of these died of tubercular disease of distant parts without waxy changes in the abdominal organs, and seven from waxy changes combined with tubercular disease.

The twelve remaining cases are under observation or treatment at the seaside, at their own homes, or in the hospital. The most recent case was operated on less than three weeks ago.

This statement shows that not more than six deaths in forty-five cases of excision of the hip are to be attributed to sequelæ of the operation. Experience in selecting cases, and the antiseptic mode of treatment during and after operations, will, I feel confident, enable us to still further diminish the proportion of unsuccessful results.

I hope to enter more fully into the whole subject at the meeting of the Clinical Society on Friday evening.

Nine of those who died from diseases not attributable to operation were at least relieved.

I am, Sir, your obedient servant,

JOHN CROFT.

Brook-street, Grosvenor-square, Dec. 9th, 1879.

NERVE-STRETCHING IN TETANUS.

To the Editor of THE LANCET.

SIR,—Will you allow me to call the attention of the surgical world to an error which, if left alone, may prejudice scientific men against the only procedure that promises much in the management of tetanus. This mistake was made by Mr. Henry Morris in a clinical lecture at the Middlesex Hospital, and has been promulgated through the columns of one of your contemporaries.

A mere statement of the case is all that is necessary to show the false basis on which he founded the "conviction that nerve-stretching in tetanus would not prove a favourable mode of treatment." The lecture was based on four operations. The one which he had done was on a patient who had a "black slough below and in front of each malleolus," for the relief of which he stretched *only* the great sciatic. Two others were done by Dr. Eben. Watson, and, as reported by Mr. Morris, were for wounds of the upper extremity, one of which was a crushed hand, but he does not state its exact limits; for this he stretched the ulnar, median, and musculo-spiral. In the other, the position of which he does not state, he stretched the cords of the brachial plexus. The one by M. Verneuil, resulting in recovery, makes the fourth.

Any tyro in anatomy could see that he could not expect to get complete isolation in his own case when he left untouched the long saphenous branch of the anterior crural, which, as we all know, supplies the inner side of the ankle and foot as far as the great toe. It seems that Dr. Watson has been equally forgetful of the internal cutaneous; for, unless his injuries lay entirely to the anterior side of the hand and arm, either directly or indirectly through its inoculations with the ulnar and radial, some of its filaments would be included in the wound; and its origin is so high up in the axilla, and is so deeply covered by the contents of this space, that, to say the least of it, in one case it is certain, and in the other highly probable, that he caught the inner cord below this point, and by so doing missed some of the filaments that led from the irritating focus.

To all who will think a moment, the way to have prevented these errors is plain. For the first, as I have recently done in a burn below and in front of the knee, beside the great sciatic, the anterior crural should have been stretched; and in the other two, the internal cutaneous, in addition to what was done, or, better still, the two primary trunks above the clavicle.

In gathering up the statistics of this operation to go with the report of my case to the Central Kentucky Medical Association, I found that, including these three cases, there have been, so far, fifteen operations, but as neither of Morris's nor Watson's cases met the indications, they should be excluded, which leaves five recoveries to twelve operations. The other seven were cases in which the operation had been delayed until the vital forces had begun to give way, but in all except those of Morris and Watson there was a considerable intermission of the symptoms. In these, however, the spasms returned as soon as the anæsthetic was removed.

I have not tried it, and of course cannot recommend it, but from my study of nerve-stretching, not only for tetanus, but for neuralgia, &c., it seems to me that it will be found on trial that a reopening of the wounds and a second stretching in a case that had obtained a remission from the first operation, would produce the same effect in the second as third. For it has been demonstrated that the paralysis roduced by this operation rarely lasts longer than a few

hours. So why should not this therapeutic agent be used in repeated doses when its good effect is as transient as opium in peritonitis? Had I thought of it in time I would have tried it in my case, and am now impatiently waiting for another on which to test it. Whilst these statistics prove nothing as to the ultimate result of the operation, still they show a better record than any other mode of treatment; and now that we have what *seems* like a clue to this long-sought mystery, let us work it out carefully, operating as early as possible, and being sure in every case to secure *complete* isolation, so that, if the operation "falls to the ground," it may do so by its own demerits, and not by the blunders of its would-be friends.

So striving, I remain, Sir, respectfully yours,

A. W. JOHNSTONE, A.M., M.D.

Danville, Kentucky, U.S.A., Nov. 11th, 1879.

P.S.—The cases that I find reported are: the four already referred to; Dr. Thomas Tours, in Bulletin de la Société de Chirurgie, "Archives of Medicine"—one case; Paul Vogt, *Nervendehnung*, "Chirug. Praxis," Leipzig, 1877—three cases, two of which were successful. Dr. Drake, *Canada Medical and Surgical Journal*, Oct., 1876—one case; Joseph Ramshoff, F.R.C.S., *Cincinnati Lancet* and *Clinic*, vol. i., 1879—one case, successful. Kemroth, *Deutsche Med. Wochenschrift*, No. 44, 1878—one case; Dr. J. J. L. Ratton, of the Medical School of Madras, in a paper on Tetanus, reviewed by *Med. Times and Gazette*—four cases, one recovery; my own making the fifteenth.

SCARLATINA IN EPSOM.

To the Editor of THE LANCET.

SIR,—In reference to the scarlatina at Epsom, I should like to record my opinion that the panic among the parents of the scholars was quite unnecessary. When I visited the school about three weeks since I found every department, especially the dormitories, most scrupulously clean and well ventilated, and every care appeared to be taken for the health and comfort of the boys. At that time, although the panic had commenced, there were but nine cases of the disease, and all were of a very mild character, with the exception of one, which I was assured was not malignant. After this date it appears that five other boys were affected; but I would submit that even fourteen cases of the disease among 250 boys was not a large proportion, and does not, in my opinion, prove defect in the sanitary arrangements of the school, and ought not to have necessitated the removal of a large proportion, and ultimately the removal of the remainder, of the boys to their several homes, more particularly as there was every facility at the school for the removal of even doubtful cases to the infirmary, which is entirely isolated. Supposing, however, that the boys who were removed had any of the infection about them, does it not appear probable that their removal was a likely means of disseminating the disease not only among their families and friends, but also among their fellow-passengers.

I trust, however, now that the scholars are removed, a searching inquiry will be made into all the sanitary arrangements, and, should any defects be discovered, they will be remedied before the reassembling of the scholars; but it must not be expected that such a large number of boys will always be exempt from disease, and should a few cases of disease occur at a future time, unless of a malignant character, it is to be hoped that a similar panic will not again be repeated. I remain, Sir, yours, &c.,

Canterbury, Dec. 4th, 1879. GEORGE RIGDEN.

THE LAST PART OF THE ZULU WAR.

(From our own Correspondent.)

WE have now all left Zululand, and all seem thankful. By the time this reaches you most of the medical staff, and probably all the civil surgeons, will have arrived at their future destination. It is satisfactory to learn that the Medical Department, on the whole, has performed its arduous part in a creditable manner. The hitches so frequently complained of as having taken place between the advanced field hospitals and the front field hospitals chiefly consisted of neglect in keeping the front well supplied with drugs and a complete staff of assistants. The base department forwarded what was needed to the advanced field hospitals correctly enough: the base depôt was under the able management of Lieutenant Johnson, A.H. Corps, at Durban, and he was responsible for the supply of all hospital equipment, medical stores, &c., for the 1st Division.

The percentage of deaths at the base has been about 5 per 1000—a most satisfactory result; but I hear that the water-supply, or rather, that the water used at the military hospital, was bad, and that its defective quality was not discovered for some time after its consumption. I also learn that in consequence of its being stopped an unpleasant feeling cropped up between the mayor of Durban and the army medical authorities at this town, the former saying that the townspeople used the same water and never suffered any ill consequences. However, I am told on the highest authority that diarrhœa and dysentery disappeared from the troops in hospital after its use had been discontinued; and, on the other hand, I learned from good authority that the diarrhœa and dysentery were caused by the sick men eating unripe oranges and other fruits, given out of kindness by the people allowed to visit unrestrictedly, and to distribute these fruits in the military hospitals. The last victim of dysentery was Lieutenant Troy, A.H.C., who was buried with military honours on Wednesday last, the whole of the medical staff and a large body of orderlies attending under Surgeon-Major Wills and Lieutenant Johnson, A.H.C.

It may be interesting to your readers to give a short account of a visit I made to numerous Zulu kraals in the neighbourhood of the Umlalazi plains, by direction of Lieutenant-Colonel Lonsdale Hale, R.E., commanding, this officer taking great interest in the sick and wounded Zulus, as well as in the British forces. I saw in all about 1200 Zulus—men, women, and children. They live in kraals in clusters of from four to thirty each. The men occupy separate kraals from the women—i.e., the married men. The young men and young women frequently live together, sleeping side by side. Only old men or men upwards of forty are allowed to marry. Each man has from one to thirty wives. Wives are purchased with cows, the value being from five to ten or fifteen cows each, so that the larger number indicates wealth. The kraals are tolerably clean and orderly, and sanitary regulations are strictly carried out. They live chiefly upon crushed mealies, cooked. The crushing is done between two stones, and the work is chiefly performed by old women. They eat meat, and usually devour cattle dying from disease, except the diseased parts, bowels and all; indeed, I have seen them eating them uncleansed. It is a common thing to see our own Kaffirs cut out the muscles of the back of an ox that died from disease, cooking and eating the same, the odour at times being frightful. They eat the sweet potato, which grows plentifully everywhere; pumpkins, which grow to an enormous size; and some native fruits. They drink Kaffir beer and sour milk. They frequently suffer from fever (common intermittent). They believe in witchcraft and charms; the latter are tied round the neck or part affected. They take medicine made from herbs and roots of trees and plants; they use the root, stem, and leaves of the common fern, by boiling (first crushing), then drinking the residue, for worms. For diarrhœa and dysentery they use the root of an astringent plant, by crushing and steeping in water; the root is shaped like a carrot, but I could not find out its name. They also practise cupping or scarification. This is done by pinching up a small fold of skin over the part affected, and nicking the same with a rude, sharp piece of iron; into these small cuts gunpowder or powdered roots are rubbed. The mati-man, or doctor, asks that so many cattle be killed as a sacrifice, and the meat is eaten by the doctor's friends. Sometimes the doctor is a woman. Frequently these native doctors pronounce the patient bewitched, and woe be to the man or woman accused—he or she will certainly be killed.

The women are not very prolific: for instance, in the case of Induna Habarna, who had thirty wives, they had only eight children alive amongst them; a few more had been born but died young. He could give me no reason for their dying so young, but on inquiry I gathered that the greatest mortality is amongst young children, from the period of birth to the time that they are able to take care of themselves and look after their own bellies, mind cattle, or become useful—two, three, or four is the ordinary number of children born to each woman; commonly only one. The

young girls and women are well cared for; they are a staple article of commerce and trade. They are, as a rule, fed on the best, and usually first after the married men; are well oiled, and carefully decorated with many beads; in this state they present an attractive appearance, ready for a purchaser. The young men are drafted into the army at about twenty years of age; they are tall and well formed, and in their way can bear fatigue in a remarkable manner. Still I have no faith in their endurance when pressure is applied; left to themselves they can do more than a European, but when forced they soon break down. The infants are small-limbed, pot-bellied, and suffer from worms, especially "tenia." They are not clothed; the boys use a small skin, but the girls nothing up to about ten or twelve years of age. I saw many old men and women, and sometimes three generations in one kraal. I also saw one bad case of leprosy, and numbers of cases of ringworm and other similar skin diseases.

The morality between the young people, in spite of their habits, is an example to civilised life; there is much liberty given and taken, but no mean advantages.

The first fruit of the new rule I observed on several occasions. I saw one young couple married the day before my visit, and sheepskin aprons, the usual sign of marriage, answering to our wedding-ring, being made by several young men to cover and adorn their future spouses. To obtain a wife is, I may say, the only stimulus for trade that exists in Zululand; money they do not value. The father hands his cows to a son. If the father dies, the son (eldest) takes his father's property, and his father's wives and his own mother, and these he sells to purchase wives for himself; other sons came badly off. A brother will take his dead brother's wives. Indeed, in every way women are important articles of wealth to the Zulus. Next to them come cows; take a Zulu's cows to strike a heavy blow at his pride, and make him feel your power! I am afraid this fact has not been acted upon so promptly or so profitably as it might have been in this war settlement. Time will show.

By direction of Lieutenant-Colonel Lonsdale Hale, R.E., a very large distribution of mealies and mealie-meal was made at Point Durnford just prior to evacuation. It was reported that the Zulu families had been reduced to great straits for food by the wholesale burning of their kraals by our own native forces; so that the object of the visit referred to embraced an inquiry into these facts, which resulted in the above distribution.

The Kaffir corn is usually stored in holes dug in the cattle-kraals. These bins hold scores of sacks of corn. The reason this particular spot is invariably chosen is because the cows' manure has the effect of keeping away insects, which abound in this country, and which would soon destroy the Kaffir reserve corn if this precaution were not taken. It should be remembered that this country is favourable to the development of all kinds of insects, parasites, and other lower organisms—scarcely a tree, plant, or their fruits, or man or beast being free from one or the other.

P.S. I omitted to mention one common mode of treating disorders of the bowels; it is by enema. This is done by passing the small end of a cow's horn into the anus; a Kaffir or Zulu will then pour (generally sea) water into the larger end, administering in this manner two or three pints at one time. This is retained for a while; the patient sometimes running about, jumping, and even standing upon his head. The fluid is then allowed to escape. This proceeding is frequently repeated.

Obituary.

SOELBERG WELLS, M.D., F.R.C.S. ENG.

THE year now drawing to a bitter unrelenting close is full of sad memories. Wars, accidents, panics, disasters, and national bereavements have followed each other with cruel frequency. Our columns have borne unwilling testimony to many professional calamities. Scarcely a month has passed but we have been called upon to announce and to make publicly known the loss of a distinguished front-rank man in our profession. The mortality has been especially great among metropolitan practitioners. The removal of such men as Murchison, Tilbury Fox, Maunder, Black, Leared, Callender, and Harry Leach, must, for a time, at least, materially weaken us. And now we have to add to this black list the name of Soelberg Wells, the eminent and skilful ophthalmologist, who died on the 2nd inst. at Cannes, whither he had resorted for the winter in quest of health, and where he was buried on Friday last.

The story of Wells' illness and failing health is a sad one. Tall, handsome, and of splendid physique, he enjoyed excellent health and spirits until about four years ago, when he somewhat suddenly broke down, and was compelled to leave his work to spend some months in the south of France and in Italy. From that time, with a few deceptive intermissions of apparent health, it was painfully evident to all his friends that he was smitten with a mortal malady, though he himself, up to within a very short time of his decease, cherished the hope that his symptoms were chiefly functional, and that rest and a genial climate would restore him to health and strength, and enable him to return to the work on which so much of his best time and energies had been spent. During the past summer he resided with benefit at Aix-la-Chapelle, and returned to London in October. He attempted to resume his public and private duties, but only to relinquish them at once. The severe weather at the end of October proved seriously prejudicial to him, and he was ordered by his medical advisers to start without delay for Cannes. This he did about the beginning of November. The weather, however, seems to have been as unpropitious at Cannes as in London, and within a week of his death he stated in a letter to the writer of this notice, "My progress to convalescence has been greatly retarded by the bad weather here, which, instead of being beautifully warm and sunny, is rainy, cold, and very tempestuous, owing to a very severe mistral which has been blowing for the last ten or twelve days, confining me to the house." A week later he succumbed to an obscure disease of the liver.

It is not easy to assign to Wells his proper place as an ophthalmologist. German blood ran in his veins, and much of his education and training, both general and professional, was conducted under the guidance of German teachers. His early professional education was begun at Norwich and finished at Edinburgh, where he graduated in 1856. Though possessed from the first of ample and even independent means, he preferred to follow an active career, and was induced to devote time to the study and practice of diseases of the eye. In furtherance of this pursuit he went to Berlin to work in the famous clinic of the late Professor von Graefe, to whom he soon became a valued assistant, and with whom he formed a firm and life-long friendship. Under the superintendence and supervision of von Graefe, Wells was carefully trained in every department of the science and art of ophthalmology. Indeed, his special training was perhaps unique in its range and completeness.

In 1860, when Wells returned to England, he was appointed clinical assistant to Mr. Bowman at the Royal London Ophthalmic Hospital, Moorfields, which post he held until his appointment as assistant-surgeon in 1867. In 1873 he was promoted to the rank of surgeon, which office he continued to hold at the time of his death. Besides this he was Professor of Ophthalmology in King's College and Ophthalmic Surgeon to King's College Hospital. None of these advantages and opportunities were lost on Wells. In spite of the temptation to ease and *dilettanteism* to which a large fortune exposed him, Wells, as long as his health allowed him, discharged his duties punctually and was zealous alike as a worker and teacher. He was a first-class specialist of the best type. His special acquirements were laid on a good foundation of general medical knowledge. One of his chief merits was that, by his writings and teaching, he familiarised English students and practitioners with the best clinical and scientific investigations of the eminent ophthalmologists of Berlin, Vienna, and Utrecht. His treatise on Diseases of the Eye, and his book on "Long, Short, and Weak Sight," the former of which has reached a third, and the latter a fourth edition, are the best works in our language on the subjects of which they treat. Their appearance inaugurated a new era in English ophthalmological literature, and they will long retain their place among the surest and safest guides. As a practitioner Wells was shrewd and sagacious, cautious in difficulties, and possessed a strong faith in local remedies. He was trusted and respected alike by patients and practitioners, and before his health failed he possessed a rich and select clientèle.

Wells leaves no near relative, but his loss is keenly felt and deplored by a large number of friends and colleagues, to

whom his courteous behaviour, his genial disposition, his integrity, and his rare social qualities, endeared him. A warm and loyal heart beat behind a placid exterior. His affections were true and strong, and in dying he has not been unmindful of the servants, dependants, and friends who served, comforted, or solaced him in life.

JOSEPH CHILTON, L.S.A.

MR. CHILTON died at his residence, 6, Bathwick-street, Bath, on Nov. 29th, after a brief illness of much suffering, aged seventy-two. Mr. Chilton's case is another instance of the peril to which medical practitioners are constantly exposed in the exercise of their professional duties. On the 24th ult., after vaccinating a patient, and while in the act of closing the lancet, he slightly wounded the tip of the fore-finger of his right hand, and on the same evening he attended a midwifery case. On the following day he felt some uneasiness in the finger, which increased, causing a sleepless night. The next day the whole of the finger became gangrenous, and had to be laid open. Phlegmonous erysipelas rapidly extended up the arm, and an abscess formed near the elbow, which was opened. The inflammation, however, continued to spread up the shoulder, with great irritative fever and delirium. He died comatose on the 29th.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members having passed the required examination for the Fellowship on Nov. 27th, 28th, and 29th, were, at a meeting of the Council held on Thursday, duly admitted Fellows of the College:—

Andrew, George, L.R.C.P. Lond., Englefield-green; diploma of membership dated Jan. 21st, 1874.
Hensman, Arthur, L.R.C.P. Edin., Harley-street, Cavendish-square; Dec. 14th, 1866.
Johnson, John, M.B. Melb., Melbourne; Jan. 31st, 1876.
Miller, Richard Shalders, M.B. Lond., L.S.A., Gower-street, Bedford-square; Aug. 1st, 1877.
Robson, Arthur William Mayo, L.R.C.P. Lond., Hillary-place, Leeds; July 21st, 1874.

Seven candidates failed to reach the required standard, and were referred for a period of twelve months' further professional study.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.D. Examination:—

Bury, Judson Sykes, B.S., University College.
Carrington, Robert Edmund, Guy's Hospital.
Carter, William, LL.B., B.Sc., Charing-cross and St. Thomas's Hospitals.
Gadsby, John Topham, B.S., University College.
Glynn, Thomas Robinson, St. Barthol. Hosp. and Liverpool.
Hadden, Walter Bangh, St. Thomas's Hospital.
Nicholson, John F. (Gold Medal), St. Thomas's Hospital.
Paget, William Smith, Liverpool and University College.
Raine, George Rolph, Guy's Hospital.
Smith, Herbert Urmson, St. Thomas's Hospital.
Uhthoff, John Caldwell, Guy's Hospital.

LOGIC AND PSYCHOLOGY ONLY.

Buchanan, Arthur, Guy's Hospital.
Cattle, Charles Henry, Leeds and University College.
Edwardes, Edward Joshua, St. Mary's Hospital.
Henderson, George Courtenay, University College.
Lubbock, Montagu, Guy's Hospital.
Phillips, Sidney Philip, University College.
Silcock, Arthur Quarry, B.S., University College.
Willoughby, Edward Francis, University College.

The following candidates have passed the recent 2nd M.B. Examination for Honours:—

MEDICINE.

FIRST CLASS.

Smith, Robt. Percy (Scholarship and Gold Medal), St. Thomas's Hospital.
Williams, Dawson (Gold Medal), University College.
* Mackern, George, Guy's Hospital.
Eq. { Gill, Richard, B.Sc., St. Bartholomew's Hospital. / Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital.

SECOND CLASS.

Fuller, Thomas Warberton, Guy's Hospital.
Boyd, James Stanley Newton, University College.
Bond, James William, University College.
White, William Hale, Guy's Hospital.
Eq. { Buckell, Arthur Edward, University College. / Hayle, Thomas Hahnemann, Owens Coll. and Manch. Roy. Infirm. / Hine, John Edward, University College.

* Obtained the number of marks qualifying for a Gold Medal.

THIRD CLASS.

Eq. { Herman, George Ernest, London Hospital. / Taylor, Harold Gilbertson, King's College. / Hayward, Thomas Ernest, St. Bartholomew's Hospital.

OBSTETRIC MEDICINE.

FIRST CLASS.

Smith, Robt. Percy (Scholarship and Gold Medal), St. Thomas's Hospital.
Fuller, Thomas Warberton (Gold Medal), Guy's Hospital.
Gill, Richard, St. Bartholomew's Hospital.
Sheppard, Charles Edward, St. Thomas's Hospital.
Herman, George Ernest, London Hospital.

SECOND CLASS.

Gabb, James Percy Alwyne, University College.
Hine, John Edward, University College.
Forsbrook, William Henry Russell, Westminster Hospital.

THIRD CLASS.

Williams, Dawson, University College.
Taylor, Harold Gilbertson, King's College.
Buckell, Arthur Edward, University College.
Hayward, Thomas Ernest, St. Bartholomew's Hospital.
Boyd, James Stanley Newton, University College.
Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital.

FORENSIC MEDICINE.

FIRST CLASS.

Taylor, Harold Gilbertson (Gold Medal), King's College.
Hayward, Thomas Ernest, St. Bartholomew's Hospital.
Sheppard, Charles Edward, St. Thomas's Hospital.

SECOND CLASS.

Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital.
Sainsbury, Harrington, University College.
Smith, Robert Percy, St. Thomas's Hospital.
Eq. { Barling, Gilbert Harry, St. Bartholomew's Hospital. / Hine, John Edward, University College.

THIRD CLASS.

Bond, James William, University College.
Hayle, Thomas Hahnemann, Owens College and Manchester Royal Infirmary.
Maylard, Alfred Ernest, Guy's Hospital.
Colquhoun, Daniel, Charing-cross Hospital.

The following candidates have passed the recent B.S. Examination:—

FIRST DIVISION.

Boyd, James Stanley Newton, University College.
Maylard, Alfred Ernest, Guy's Hospital.
Pughe, Rhinallt Navalaw ap Joan, Liverpool Royal Infirmary.

SECOND DIVISION.

Bond, James William, University College.
Jones, Thomas, Guy's Hospital.
Williams, Dawson, University College.

The following candidates have passed the recent B.S. Examination for Honours:—

SECOND CLASS.

Jones, Thomas, Guy's Hospital.
Boyd, James Stanley Newton, University College.

THIRD CLASS.

Bond, James William, University College.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 4th:—

Baker, William James, Millbrook, Southampton.
Harper, Charles Frederic, Stowmarket, Suffolk.
Jones, William, Aberystwith, South Wales.
King, Ernest Edward, Saffron Walden.
Redmond, Walker, Grange Loughgall, Ireland.
Runnells, Harry Boyle, New Quay, Cornwall.
Stansby, Charles John, Hoxton-street, N.
Walter, Robert Spence, Hebden-bridge, Yorkshire.
Williams, William, Llwydcoed, Aberdare.

The following gentlemen on the same day passed the Primary Professional Examination:—

James Samuel M'Donagh, University College; James Wm. Papillon, St. Thomas's Hospital.

[In the list published last week, for "Edward Talbot," read Edward Talbot Palmer.]

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At an examination recently held the undermentioned gentleman was admitted a Fellow of the College:—

Thomas Kinley Hamilton.

THE lectures in connexion with the Brown Institution will be delivered by Dr. Greenfield, at the University of London, on December 17th, 18th, 19th, 22nd, and 23rd, at 5.30 P.M. The subject will be Recent Investigations on the Pathology of Infective and Contagious Diseases.

THE officers of the Army Medical Department at Portsmouth entertained Surgeon-General Thomas Best at dinner on Tuesday last, on the occasion of his retirement

from the service. The cordial and enthusiastic manner in which the toast of his health was received shows the high estimation in which this respected officer was held at Portsmouth.

THE following gentlemen have been appointed office-bearers for the ensuing session of the Biological Association, Trinity College, Dublin:—President: Alexander Macalister. Vice-Presidents: Edward H. Bennett, Samuel Haughton, Thomas Evelyn Little, John M. Purser, Edward B. Sinclair, Benjamin Wills Richardson, E. P. Wright.

EDINBURGH OBSTETRICAL SOCIETY.—The following is the list of newly elected office-bearers for the ensuing session:—President: Dr. Angus Macdonald. Vice-Presidents: Dr. A. R. Simpson, Dr. Bruce. Librarian: Dr. Chas. Underhill. Treasurer: Dr. William Craig. Secretaries: Dr. James Carmichael, Dr. Berry Hart. Members of Council: Dr. Croom, Dr. Peel Ritchie, Dr. J. Young.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mrs. Caroline Batty, of Grove-end-road, St. John's-wood, bequeathed £1000 each to the City Orthopædic Hospital, St. Mary's Hospital, the Convalescent Hospital for East London at Snaresbrook, the Charing Cross Hospital, the Brompton Hospital for Consumption, &c., the Earlswood Asylum for Idiots, St. Luke's Hospital for Lunatics, the Middlesex Hospital, the London Hospital, the Metropolitan Convalescent Institution at Walton-on-Thames, the Metropolitan Free Hospital, the Cancer Hospital, the City of London Hospital for Consumption, the Royal Hospital for Incurables, and the National Hospital for the Paralysed and Epileptic; and £500 each to Queen Charlotte's Lying-in Hospital, the General Lying-in Hospital, the Royal National Hospital for Consumption at Ventnor, and the Royal Medical Benevolent College. Lady Johnson has given £600 to the Convalescent Hospital, Belfast. Mr. W. Crawford has given £200 to the Home for Incurables, Cork. The Belfast Royal Hospital will receive close on £3000 under the will of the late Dr. Bryson, of Coalisland.

Medical Appointments.

ADAM, J., M.D., has been appointed Medical Superintendent of the Crichton Royal Institution, Dumfries, vice Gilchrist, resigned.

ASH, T. L., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Okehampton Rural Sanitary District, at £3 3s. per report, when called upon to make one.

BALDWIN, F. B. J., M.R.C.S.E., L.S.A.L., has been appointed Senior House-Physician to Guy's Hospital, for December.

BATCHELOR, G. A., M.B., C.M., M.R.C.S.E., has been appointed Medical Officer for the No. 5 District of the Hackney Union, vice Ninall, resigned.

BERRY, F. H., M.R.C.S.E., has been appointed Junior House-Physician to Guy's Hospital, for December.

BLAKELY, S., M.D., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the District of Fivemiletown, co. Tyrone.

BUNN, C. G., L.S.A.L., has been appointed Resident Medical Officer to the Charing-cross Hospital, vice Harrison, resigned.

CLARKE, W. J., L.S.A.L., has been appointed Assistant Surgical Officer to the Charing-cross Hospital, vice Murray, whose term of office has expired.

CULLING, J. C., L.S.A.L., has been appointed Resident Obstetrical Officer to the Charing-cross Hospital, vice Turton, appointed Resident Surgical Officer.

FULLER, T. W., M.B., has been appointed Second House-Physician to Guy's Hospital, for December.

HENRY, R., M.D., has been appointed Certifying Factory Surgeon for the District of Brookborough, co. Fermanagh.

HODGES, W., M.R.C.S.E., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Cirencester, vice Cripps, resigned.

HOLMES, D., M.B., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Knightwick District of the Martley Union, Worcestershire, vice Etheredge, deceased.

HOLMES, N. W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed House-Surgeon to the Manchester Southern Hospital for the Diseases of Women and Children, vice Scott.

HOOLEY, A., L.S.A.L., has been appointed Assistant Medical Officer to the Charing-cross Hospital, vice Bunn, appointed Resident Medical Officer.

HOWELL, T. A. I., L.R.C.P.L., M.R.C.S.E., has been appointed Senior Obstetric Assistant to Guy's Hospital, for December.

JACOB, E. L., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Chertsey, Dorking, Epsom, and Reigate Rural, and Epsom and Reigate Urban, Sanitary Districts, at £600 per annum, for three years.

JOHNSON, W. F., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Certifying Factory Surgeon for the District of Charing, Kent.

JONES, E. W. T., F.C.S., has been reappointed Public Analyst for Walsall, at £50 per annum, and £2 2s. per day when required to give evidence.

KNOX, T., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Certifying Factory Surgeon for the District of Magniresbridge, co. Fermanagh.

LILLEY, G. H., M.D., M.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Ogley Hay District of the Lichfield Union, vice Dalton, resigned.

MCNEILL, J. P., M.D., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Tiverton East and Tiverton West Districts of the Tiverton Union, vice Terry, resigned.

MANSELL, E. R., M.R.C.S.E., L.S.A.L., has been appointed Junior House-Surgeon to Guy's Hospital, for December.

MORRISSY, Dr. E., has been appointed Medical Officer, Public Vaccinator, &c., for the Kingscourt Dispensary District of the Ballieborough Union, co. Cavan, at £90 per annum and fees, and £22 10s. per annum as Medical Officer of Health, vice O'Hagan, resigned.

ORR, J. W., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Wollaston District of the Wellingborough Union, Northamptonshire, and Medical Officer to Odd Fellows', Foresters', and Benefit Clubs, Wollaston, vice Bird, deceased.

PENNY, E., M.R.C.S.E., L.S.A.L., has been appointed Senior House-Surgeon to Guy's Hospital, for December.

POLAND, J., L.R.C.P.L., M.R.C.S.E., has been appointed Second House-Surgeon to Guy's Hospital, for December.

SCOTT, J., M.B., C.M., has been appointed an Honorary Surgeon to the Manchester Southern Hospital for the Diseases of Women and Children.

SCOWCROFT, J. E., F.R.C.S.Ed., L.R.C.P.Ed., has been appointed an Honorary Surgeon to the Bolton Infirmary.

STEAVENSON, W. E., M.B., M.R.C.S.E., has been appointed House-Surgeon to the Hospital for Sick Children, Great Ormond-street, vice Kempe, whose appointment has expired.

TURTON, J., L.S.A.L., has been appointed Resident Surgical Officer to the Charing cross Hospital, vice Pattison, resigned.

VINRACE, Mr. J. H., has been appointed House-Physician to the Queen's Hospital, Birmingham.

WAGSTAFF, P. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Perseverance Lodge, No. 2813, of the Ancient Order of Foresters, Leighton-Buzzard, vice Harris, deceased.

WAINWRIGHT, R. S., M.R.C.S.E., L.S.A.L., has been appointed Junior Obstetric Assistant to Guy's Hospital, for December.

WHARRY, A. J., M.R.C.S.E., has been appointed House-Surgeon to the Great Northern Hospital, vice Gilliam, resigned.

WILLIAMSON, R. L., M.B., L.R.C.P., has been appointed House-Surgeon to the Clayton Hospital and Wakefield General Dispensary, vice White, resigned.

Births, Marriages, and Deaths.

BIRTHS.

CAMPBELL.—On the 30th ult., at Wellington-square, Hastings, the wife of William Campbell, L.R.C.S.Ed., of a daughter.

HEAD.—On the 28th ult., at Balsham, Cambridgeshire, the wife of Robert T. Head, L.R.C.P.L., of a son.

JONES.—On the 8th inst., at Chapel-street, Belgrave-square, the wife of Thomas Ridge Jones, M.D., of a son.

PHILLIPS.—On the 7th inst., at Bromley, Kent, the wife of Robert Edward Phillips, M.D., of a son.

THOMAS.—On the 8th inst., at Kirkbrae, Selkirk, the wife of James Thomas, M.D., of a son.

WIGMORE.—On the 9th inst., at Inverness-terrace, Hyde-park, the wife of William Wigmore, M.R.C.S.E., of a daughter.

WRIGHT.—On the 5th inst., at Hartford, Northwick, the wife of Strethill H. Wright, M.D., of a son.

MARRIAGES.

FLINT—FOX.—On the 4th inst., at the Parish Church, Croydon, by the Right Rev. Bishop Tufnell, D.D., late Bishop of Brisbane, assisted by the Rev. W. R. Morgan, Vicar of West Heathley, and the Rev. Arthur Jephson, M.A., Arthur Flint, L.R.C.P., M.R.C.S., of Westgate-on-Sea, to Amy, youngest daughter of Charles Fox, Esq., of Park-hill, Croydon, and Woodlands, near West Heathley, Sussex.

PRESTON—CANE.—On the 27th ult., at the Parish Church of St. Marylebone, by the Rev. Thomas Preston, M.A., Vicar of Swaffham Prior, Cambs. (father of the bridegroom), assisted by the Rev. D. Collyer, Vicar of Castleacre, Norfolk, Alfred Chevallier Preston, M.R.C.S., to Harriet Eliza, eldest daughter of the late William Henry Cane, M.D., of Uxbridge.

DEATHS.

ADAMS.—On the 1st inst., at Adelaide-street, Kingstown, co. Dublin, William O'Brien Adams, M.B., F.K.Q.C.P.I., aged 75.

CHILTON.—On the 29th ult., at Bathwick-street, Bath, Joseph Chilton, L.S.A.L., aged 72.

FOWLER.—On the 5th inst., at Brighton, after a few hours' illness, Anne Sophia, the beloved wife of Robert Fowler, M.D., of Bishopsgate, E.C., aged 47. Friends will kindly accept this intimation.

GALTON.—On the 6th inst., at Brixton-rise, Surrey, Edmund John Galton, Esq., in his 74th year.

HUGHES.—On the 22nd ult., at Lympstone, Devon, Robert Hughes, F.R.C.S.E., formerly of Stafford, aged 77.

RAWLINGS.—On the 29th September, at Norwood, Adelaide, Joseph Henry Rawlings, M.D.

ROSSITER.—On the 4th inst., at Southfield Villa, Taunton, Frederick William Rossiter, Surgeon, aged 72.

SMITH.—On the 3rd inst., at Tottenham, Charles Smith, M.R.C.S.E., formerly of Highgate-road, aged 73.

TASKER.—On the 8th inst., at Melbourne, Derby, Richard Thomas Tasker, M.R.C.S., L.S.A.L., aged 61.

TAYLOR.—In October, Arthur Taylor, L.R.C.P.Ed., of Corfu.

WALLACE.—On the 8th inst., at 248, Hackney-road, Annie Mabel, the only child of Frederick Wallace, L.R.C.P.L., aged 1 year and 11 months.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Dec. 11th, 1879.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 5	29·69	N.	28	..	..	36	20	..	Overcast
" 6	29·97	N.E.	30	..	..	38	25	..	Overcast
" 7	30·46	W.	25	..	..	35	18	..	Foggy
" 8	30·48	N.E.	35	34	..	39	25	0·04	Overcast
" 9	30·64	S.	33	32	..	37	29	..	Overcast
" 10	30·43	S.W.	37	36	..	40	31	..	Foggy
" 11	30·63	S.W.	25	..	..	35	22	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

KITCHEN-BOILER EXPLOSIONS.

THE exigencies of the season make a large demand on the supply of hot water for domestic purposes, and these are commonly increased by the presence of illness in a household. Under the pressure servants, seldom very careful, grow utterly reckless, often disturbing the apparatus by which the boiler is fed with cold water if they can get at it, and thereby rendering an arrangement, which may be essentially safe, full of danger. Kitchen-boiler explosions are, therefore, by no means uncommon accidents, and the peril is great. A word of caution will not be out of place, more particularly as it has a certain application to every form of apparatus by which water is heated in and for the sick chamber. No harm can be done, and danger may be avoided, by saying to all who use hot water largely: take care of your boilers; neither let cold water find its way into a very hot chamber, nor trust to keeping lids tight to boil water quickly. One-half the accidents that occur arise from the evaporation of the contents of a boiler or vessel of any kind and a sudden influx of cold water.

A Constant Subscriber.—Our advice would be for the lady in question to wait to be called upon, as in other cases.

HÆMORRHAGE DURING PREGNANCY.

To the Editor of THE LANCET.

SIR,—I was called on the 9th ultimo to see Mrs. C——, who was very much in the same state as Mr. Townshend's patient. Shortly after I arrived she fainted from loss of blood. I examined her, and found the os uteri dilated so that I could only introduce the point of my index-finger. I gave her a teaspoonful of solution of ergot with some brandy, and plugged the vagina with a silk handkerchief. This had the effect of controlling the hæmorrhage, and she has had no return of it since. She told me she had just gone twelve weeks in pregnancy. I have no doubt that giving a full dose of ergot had in this case the effect of preventing abortion taking place.

I may mention that last year I attended her for placenta prævia at five months, and that this was the twenty-third time she had been pregnant, and has had a large family.

I am, Sir, yours faithfully,

Patterdale, Dec. 2nd, 1879. FRANCIS C. MACNALTY, M.B., &c.

A CORRESPONDENT refers to an old monthly medical gazette (dating from about the years 1815 to 1830). It was very popular with the profession about that time, and was edited by a "Dr. Richard Reece," and entitled, *The Monthly Gazette of Health*; or, Popular Medical, Dietetic, Philosophical, and Anti-Empirical Journal; aided by several eminent physicians in America, the East Indies, and on the Continent of Europe. It is very amusing, though out of date.

LEPROSY.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Powell's interesting case of Elephantiasis Græcorum at the Clinical Society, I beg to state that two years ago I published cases of leprosy with unusual enlargement of the femoral glands, which I designated "pairs of symmetrical tumours in the groin." This enlargement entirely disappeared under the influence of gurjon oil.

Faithfully yours,

JOHN D. HILLIS, F.R.C.S.,

Visiting Surgeon to the General Leper Asylum.

British Guiana, Nov. 5th, 1879.

TRICYCLES.

A CORRESPONDENT asks for information as to any observed effects of the continued use of tricycles, more especially whether their employment has been found inconvenient or dangerous to persons suffering from rupture.

PRIZE FOR ESSAY ON FEVERS.

SURGEON-GENERAL C. A. GORDON, M.D., C.B., Honorary Physician to Her Majesty, with the approval of Government, offers a prize of 900 rupees to the best Essay on Fevers as affecting British Soldiers in India. Particulars with regard to conditions, arbitrators, date, and manner of submitting Essays are as follows:—

1. The Essays must include a comparative history of that class of diseases as given by the older writers and by the more modern; their causes, including such as are predisposing and those that are direct or exciting; their relative prevalence and mortality according to age and residence in India; their modifications by diathesis, locality, climate, and season; their pathology; their treatment, illustrating this important point, as far as possible, by records of "cases" either from case-books or published works dating previous to 1857, and of those of a date subsequent to that period; the object being to indicate as clearly as may be practicable the results of the several methods adopted, and thus obtain a guide with regard to the future.

2. The assigned causes of *fevers* being investigated and categorically detailed, measures will be indicated by which their prevalence among British troops and their present very serious rate of mortality may for the future be diminished.

3. With reference to what some writers may in their Essays designate *enteric or typhoid fever*, they will give a distinct definition of the precise significance attached by them to these terms, whether applied in a sense independent of each other or synonymously; also in the event of either term being used to indicate a specific and otherwise independent disease rather than a *condition of, or complication* occurring in, the course of endemic fevers, whether continued or periodic in type, a distinct and precise record must be given of the circumstances upon which the distinction thus indicated is based.

4. The prize now offered will be open to all officers of the Army Medical Department and of the Indian Medical Service of the three Presidencies, whether upon retired or full pay, provided that they have, on the 31st August, 1879, severally done medical duty with British troops in India during five full years and upwards.

5. The award of the prize now offered shall rest with three arbitrators, who must themselves have done duty for at least five years with British troops in India, and have been at least ten additional in that country, making in all not less than fifteen full years in India. Government has been solicited to request the Director-General of the Army Medical Department, the Right Honourable the Secretary of State for India, and the Army Sanitary Commission, each to appoint one of the three arbitrators, the latter unconnected with the Commission itself; these three to have power, should they so desire, to add two to their number, so as to make it five in all; and at least one of the arbitrators to have himself served in India as above during not less than ten years prior to 1857.

6. Essays by officers of the Army Medical Department should be transmitted through the usual channel to the Director-General of that department; those by officers of the Indian Medical Service through their channel of communication to the India Office.

7. With a view to afford ample time for the preparation of Essays, the 31st of December, 1881, will be the latest date on which those Essays will be received in the India Office or that of the Director-General, and the decision of the arbitrators as to the award of the prize for the best of those Essays will be published in England and India, if possible, not later than 31st of July, 1882.

8. In the event of no Essay being laid before the arbitrators, or of their considering it desirable for other reasons to withhold the reward for the present, they are hereby authorised to re-model the conditions of award in such manner as to them may appear fit, bearing in mind the general object in view in offering the prize as above detailed.

A Sufferer may refer to THE LANCET of Feb. 22nd, 1879, in which will be found letters on the subject of axillary bromidrosis containing the information required.

Mr. A. Morton.—1. Tanner or Roberts.—2. Holmes.—3. Leishman.—4. Holden on Osteology.—5. Heath's Surgical Diagnosis.

SCOTTISH POOR-LAW MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I would be glad if any of your correspondents could enlighten me as to the rules and regulations of the Scottish Poor-law medical service. I am an Englishman, but have been parochial medical officer of a Scotch parish for the past five years. During that time I have never had a single complaint laid against me concerning my attendance on, or treatment of, the parish poor. Last month, however, for family reasons (wife's illness), I was not quite so attentive as I could have wished to my *private patients*, and I find that they are about to report me to the Board. I am now told that the Parochial Board, if they think fit, can discharge me on the spot whenever they like, and that I have no redress. If this is the law it is a very hard one. It surely is enough for the Parochial Board to look after its paupers without taking a paternal interest in the entire neighbourhood. In the event of my discharge without any official complaint having been made against me, have I a right of an appeal to the Board of Supervision?—Yours &c.,

December, 1879. PAR. MED. OFF.

SEWING REFORM.

THE dangers which the sempstress, especially the young undeveloped girl, incurs by prolonged stooping over her work have been exposed by us on more than one occasion. Every practitioner will have been able to trace cases of deviation of the spine, uterine complaints, &c., to the bending of the back, and the crossing of the legs for so many hours day after day. Our object now is to record the successful attempt made by Dr. Malherbe to avoid these melancholy consequences of an industrious occupation. The new system employed is that of fixing to the edge of an ordinary table a sort of cushion on which the work can be easily fastened or spread out, and represents the sempstress' knees. A framework of the simplest description admits of the raising or lowering of this cushion, so that the work may be done either sitting or standing; but in either case the vertebral column is maintained perfectly straight, while the facility thus given to a change of position will tend to mitigate the fatigue a young person would otherwise experience. Recognising that example is more forcible than theory when waging war against common routine, Dr. Malherbe at once sought an opportunity for making some practical experiments. He therefore introduced his contrivance at the Communal School of Nantes, and no objection was raised on the part of the pupils. Two among them had a slight tendency to malformation, which has been to some extent rectified since the introduction of this reform in the attitude of sewing. Evidently the remedy to a great evil is simple, practical, and should be made the subject of more extensive experiments.

THE MORNING TUB.

To the Editor of THE LANCET.

SIR,—The remarks in your number of Nov. 29th, on the subject of the morning tub, are undoubtedly, when restricted to the case of the very old or delicate, so perfectly scientific and correct that no one could cavil at them, and I should not have troubled you on the subject were it not from the fear that possibly your remarks might be held to apply to a much larger circle than the limited few to whom they were intended to relate. Like every other valuable agent for promoting health, cold water (or *cold*, for water is only its vehicle) is, of course, liable to abuse, and the ignorant and incautious should be put on their guard against the risk such misuse may occasion. As you state, the true test of the beneficial action of cold water on the system, whether it be used in the morning or at any other hour of the day, is a very simple one, and depends on the reaction which follows it. The first effect of cold to the surface being to constringe the vessels of the skin, and drive the blood temporarily inwards, the otherwise strongly tonic effects of the bath will not be secured if an almost immediate return of the blood to the surface does not take place in increased volume, and with that sense of glow and vigour that should accompany it. A lengthened experience of this method has taught me that very much depends on the mode of application and of general management. At the outset, and supposing that no organic disease exists, the number of those to whom the bath is not properly applicable is much smaller than might be supposed. On this point you can lay down no hard-and-fast line, so much always depends on idiosyncrasy, and so much also, as just said, on the *modus operandi*. Old age alone is not a bar *per se*, for everyone knows that you will find very many men at seventy and upwards with more powerful circulation and more general vigour than others at forty or even thirty. But the management of the operation is of the greatest importance to old and young alike, and perhaps the following practical hints on this subject may be found of service: In the first place, it is an old philosophical maxim that oftentimes "the half is more than the whole," and it nowhere holds more truly than here. Though your cold tub is in your room when you rise, it does not follow that you must necessarily immerse yourself bodily in it; that you should sit or even stand in it. On the contrary, unless you are young and robust, it will suffice that, standing on a warm rug, you lean over it, and dipping your sponge freely in the water, you lave head, neck, thorax, and extremities rapidly but vigorously. The operation need not occupy more than a single minute. In all cases friction must follow, in a warm linen sheet or blanket where necessary, and at the hands of an attendant, when he can be had, to assist in the operation of rubbing. Then, again, the chill of the water may be taken off in very cold weather, and the temperature of the bath raised to 70° or 75° in those cases where the circulation is less powerful. And, finally, wherever at all possible, brisk exercise on foot in the open air should follow the bath, if only for ten minutes; and when that cannot be done, minor gymnastics, such as the use of dumb-bells &c., should be practised before leaving the bedroom, so as to secure the needed reaction. These things, in fact, are to be considered the true corollaries of the bath, without which the use of it is incomplete, unscientific, and in very many cases absolutely contra-indicated. I forward these few practical suggestions, the adoption of which may often enable even those who are feeble to practise with benefit and with pleasure this most valuable habit—a habit peculiarly English, and one honourable to our race, if, as is said, "Cleanliness comes next to godliness"—a habit as wholesome as it is manly; and, since it requires courage and self-denial, one equally calculated, in my idea, to brace the moral as well as the physical fibre of the nation.

Yours faithfully,

Harley-street, December 2nd, 1879. EDWD. LANE, M.A., M.D.

THE LOWEST TENDER SYSTEM IN MEDICAL APPOINTMENTS.

WE have received information of the Holm Parochial Board, Orkneys, at its annual meeting failing to reappoint their medical officer, John Bruce, M.B., who had served them, without complaint, for years, and appointing the Rev. Mr. M'Neill, who has recently become a licentiate of the Faculty of Physicians and Surgeons of Glasgow. The reverend gentleman put a temptation in the way of the Board, which on reflection he will not think creditable or satisfactory. He offered to do the work at less than half the salary of the previous holder. The offer was too tempting, and the Board fell into the acceptance of it. We protest against a public Board taking so mercantile a view of its duties.

THE ASSESSOR TO THE ST. ANDREWS UNIVERSITY COURT.

To the Editor of THE LANCET.

SIR,—I have received a copy of a circular which has been sent to the graduates of St. Andrews, by "a committee for promoting Dr. Carpenter's return as Assessor to the General Council," in opposition to Dr. B. W. Richardson, "who has held office for two terms of four years each," and who, the conveners allege, "seeks to be elected the third time." This statement, I submit, does not put the matter in its true light. Dr. Richardson, I can affirm from attendance at the meeting of the London Committee, does not seek a third election, but has submitted to the candidature in obedience to the urgent wishes of the London Committee of St. Andrews graduates. Pressure has been put upon Dr. Richardson, because it is felt that he is thoroughly conversant with the best interests of the University, and its relations to other academic bodies. Being moreover resident in London, and daily in greater or less degree of intercourse with the leading men of the day, he is eminently well-fitted to watch over those interests. That Dr. Richardson, residing in London, has not attended all the meetings of the General Council of the University in the city of St. Andrews, is urged as a reason against his re-election. The same objection will be found to hold as against Dr. Carpenter, or any other graduate on this side of the Tweed. Dr. Richardson is a graduate of St. Andrews, and has therefore *pro tanto* a direct personal claim over Dr. Carpenter; beyond this no comparison can be ventured. To attempt any laudation of the scientific and professional reputation of Dr. Carpenter would be to gild refined gold. The point, however, in dispute is not so much reputation or scientific attainments, but the possession of a practical acquaintance with the interests of the constituency by whom the election is to be made.

I remain, Sir, your obedient servant,

Holloway, London, N., Dec. 9th, 1879. W. B. KESTEVEN.

To the Editor of THE LANCET.

SIR,—The reasons given by the Council of the St. Andrews University for desiring to change their assessor are so good that few will call in question the propriety of their decision. Dr. Richardson seems to regard the office as quite an honorary one. In these days of university stir and reform it is not surprising that this view is not taken by the Council, and that considerable discontent has been created by his almost total neglect of the duties of the office. This discontent found expression in the very decided majority (19 to 2) by which the Council decided that it was undesirable that Dr. Richardson should be re-elected.

The Council looks to the interests of the University, and naturally tries to find a man who is likely to promote these interests. But something may also be said in favour of Dr. Richardson's view that the office is to some extent an honorary one. It *is* an honour to a man to have such an office conferred on him, and on this ground it would be well that the honour should not be again and again conferred on the same man, no matter how deserving; for other meritorious men are thus deprived of their share of the few similar honours which our universities have to confer.

For this reason, as well as on account of the very decided recommendation of the Council, it is to be hoped that the graduates of the University, with whom the ultimate decision rests, will not fail to do honour to one who has shed lustre on British science, and whose name is known and revered wherever science is cultivated.

To the medical graduates it should be specially gratifying, after having twice given their votes for Dr. Richardson, to have the opportunity of now recording them in favour of another M.D. who has done so much for physiology and for science, and has probably done more than any man living to demonstrate that the medical profession is the chief portal by which the wide field of general science is entered.

I know St. Andrews University well; I know its wants, and I know its aspirations. That its interests will be safe in Dr. Carpenter's hands everyone knows.

For Dr. Richardson I entertain a high regard, but I think he has acted unwisely in trying to be re-elected for a third term of office. For such an honour as that which he seeks is one which should not be heaped again and again on one individual, while there are others equally deserving on whom it might be bestowed.

No one will say that Dr. Carpenter is less eminent and less deserving than Dr. Richardson. Dr. Richardson has twice already had the honour conferred on him. The medical graduates should not lose the opportunity of now showing their estimation of Dr. Carpenter's splendid services to physiology and to science in general.

I am, Sir, yours obediently,

Dec. 9th, 1879. T. J. MACLAGAN, M.D.

Mr. Fergus M. Brown.—We have to thank our correspondent for the information he sends us as to Mr. Norman Shaw's method of dealing with soil-pipes so as to prevent sewer-air passing from them into the interior of houses. According to our experience, this method is so well known among architects as to render a description unnecessary in our pages. We are glad to see that its merits are fully appreciated by our correspondent.

R. F. H.—The matter is not necessarily settled because Professor Tyndall has uttered his last word; it is merely sleeping.

OPERATION FOR DETACHMENT OF THE RETINA.

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 22nd there is a report of a case of an operation performed by Mr. Macnamara for separation of the retina. Considering the complicated nature of the case in question, I take even the temporary restoration of sight to be so far encouraging.

The case which I published in THE LANCET for Oct. 12th, 1878, has been lasting in its results, so that my patient, who was totally insensible to light, is now able to serve behind his counter without any indication of diminution of vision. I think, therefore, in cases of subretinal dropsy, without neuritic, choroidal, or vitreous complications, a successful issue may be expected. Dr. Hirschberg also gives me encouraging results of his cases. I would, however, make a remark with regard to one point in connexion with the *modus operandi*. Mr. Macnamara introduced the knife in one spot, but no fluid came out, and he had to reintroduce it at another, when fluid welled up under the conjunctiva. This reminded me of the practical difficulty there is in piercing the sclerotic below the equator in a precise spot. The eyeball is sure to rotate imperceptibly, so that the exact point of entrance is missed; hence the practical importance of my suggestion to make a small button-hole in the conjunctiva and subjacent structures, and to keep the lips of the wound asunder by strabismus hooks, which enable us to enter directly into dropsical effusion. We are also thereby able to direct our instrument with precision obliquely between the fibres of the sclerotic, so as to prevent choroidal hernia and subsequent softening of the eyeball.

Yours faithfully,

Glasgow, Dec. 1879. J. R. WOLFE.

Medway.—H. K. Lewis, Medical Library, 136, Gower-street; H. Kimpton, 82, High Holborn; R. Kimpton, 31, Wardour-street; Eade and Caulfield, Princes-street, Cavendish-square.

Mr. Thomas Wheeler.—From one to three guineas a day, and reasonable expenses for travelling and attending the trial.

UNUSUAL INJURY TO THE EAR.

To the Editor of THE LANCET.

SIR,—The case mentioned by Mr. F. C. Brett in your issue of the 29th ult. is interesting and instructive. The history, however, is somewhat meagre, and there is no account of the condition of the ear as visible with the speculum, or of the tympanum and Eustachian tubes as revealed by the use of the diagnostic tube, and Valsalva's or Politzer's inflation. We know certainly that the left Eustachian tube is patent from the air rushing through it. Rupture of the membrana tympani (which is, of course, what happened in this case) from blowing the nose or sneezing is very rare without pre-existing catarrh of the Eustachian tube and tympanic cavity. The deafness, therefore, is probably due almost as much to a catarrhal condition of the middle ear as to the rupture of the membrane. Careful examination should be made to ascertain the condition of the tubal, tympanic, pharyngeal, post-nasal regions as to catarrh, and, if such be found to be present, treatment must be directed to restoring them to a healthy state. Astringent gargles, vapour inhalations of benzoin, creasote, &c., used by Valsalva's method, and the regular employment of Politzer's inflation, with the internal administration of chloride of ammonium, will probably be of use in this direction. When the aural and pharyngeal regions have been brought into a healthy state, if the membrane do not heal, some form of artificial membrane may be tried, or the application of a layer of collodion, as suggested by Dr. M'Keown, of Belfast, at the recent British Medical Association meeting at Cork.

I remain, Sir, yours &c.,

Bournemouth, Dec. 4th, 1879. W. D. HEMMING, F.R.C.S. Edin.

STAMMERING OF THE VOCAL CORDS.

To the Editor of THE LANCET.

SIR,—In his letter on the above subject, Mr. Holmes confines his attention to cases of stuttering; but the affection—first described by Dr. Prosser James—may exist without any apparent defect in articulation. Indeed, *this* I think to be the essential point of Dr. James's paper, for he distinctly speaks of vocal stammering affecting the laryngeal movements *only* when the movements for enunciating syllables were perfectly performed. It is true, he says, other impediments of speech have their counterparts in the larynx; but in this one form of disease syllabication is complete, phonation defective, and the case of the clergyman alluded to a striking one. The separation of these cases is an advance in the "science" of observation, for which we are indebted to Dr. Prosser James, as given in his paper in THE LANCET of the 15th ult.

Yours faithfully,

R. LOCKE JOHNSON,

Physician to the N.L. Hospital for Consumption, &c.

Bury-place, W.C., Dec. 8th, 1879.

Inquirer.—The following gentlemen constitute the Board of Examiners in Anatomy and Physiology both for the Fellowship and Membership, and are distributed thus:—At table A: Messrs. Wood, of King's College, and Baker, of St. Bartholomew's Hospitals. B: Messrs. Power, of St. Bartholomew's, and Rivington, of the London Hospitals. C: Messrs. Heath, of the University College, and Pick, of St. George's Hospitals. D: Messrs. Hulke, of the Middlesex, and Durham, of Guy's Hospitals. Mr. Holden, the President, has taken the place heretofore occupied by Mr. Holmes as Chairman of the Board.

MEDICAL PRACTICE IN THE COLONIES.

To the Editor of THE LANCET.

SIR,—I notice in to-day's LANCET a request from "S. W. J." for information on the subject of "the demand and supply of medical services in South Australia." Having practised in that province for twenty years, and having left there about the middle of the present year, I am able to answer his request.

On the whole, the colony is well supplied with medical men; but as new towns are constantly springing up, and the older towns are constantly increasing in size, there is always room for a steady but moderate influx of new-comers. I would not advise anyone who is doing fairly well in England to break up his home for the chance of doing better in Australia; but if any gentleman wishes to make a new start in life, he may go to the colony with a fair prospect of success, providing he is bodily strong, has a good knowledge of his profession, and has that kind of energy which will enable him to adapt himself to the go-ahead pace of a young and prosperous community. The last-named qualification is an essential one. Nothing has struck me more forcibly since my return to England than the difference between average Englishmen and Australians with respect to the energy manifested in whatever they undertake. Whether this difference is due to the stimulating effects of the bright Australian sky, which for eight months of the year is all that can be desired, or whether the absence of the dark pall of "caste" makes men feel that in that land everything is possible, it is certainly true that Australians in all walks of life manifest what they call "go" to a degree which would astonish the more deliberate Londoner. If a man has some degree of this "go" in his nature, is not afraid of hard work, and even "roughing it" at times if need be, he may go to Australia with a certainty that he will make his way. Medical practice there will not yield a large fortune; but competence is within the reach of all. The system at present in fashion in Adelaide is the one-faculty system. There are no special consultants, although, of course, some of the more popular men get better fees than others. The lowest fee in Adelaide is 5*s.* Patients of the richer sort are expected to pay more. Midwifery fees vary from £2 2*s.* to £5 5*s.* Clubs pay about 10*s.* per member. There are no parochial appointments worth notice. Every medical man is expected by the public to do his own work. I do not think there is a solitary assistant in Adelaide. There are numbers of high-class men in the colony, and the tone of the profession is decidedly good. To be on the safe side, "S. W. J." should calculate that his working expenses in Australia would be about one-third higher than in England.

Yours faithfully,

A CONSULTING SURGEON, ADELAIDE HOSPITAL.

Nov. 22nd, 1879.

To the Editor of THE LANCET.

SIR,—Having returned some few months ago from the Australian colonies (New South Wales and Victoria), and having had experience of medical practice therein, I offer the following particulars for the information of "S. W. J."

As regards the capitals and large towns, it would be almost impossible to make even a living, except perhaps in some speciality, for a long time. The mining districts are better; but I would recommend one of the smaller towns in a pastoral or agricultural district. There are plenty of such openings, the great drawback being the distance from the capitals; but living and houses are cheap, and, as a rule, the fees are good and portion of bad debts small. The following are the usual fees:—Consultation and medicine, 10*s.*; midwifery, £3 3*s.* each confinement; with a mileage of 5*s.* per mile. In some of the country towns hospitals are established, with a salary of about £200 per annum, and house accommodation, which, with private practice, would yield a salary of £600 per annum or more. There are also, I believe, fine openings in South Queensland; but I do not know much about that colony or South Australia, but suppose they are all much the same.—Yours &c.,

November, 1879. R. W. BARNEY.

RETENTION OF CATHETER IN THE BLADDER.

To the Editor of THE LANCET.

SIR,—This apparently simple and very useful measure was successfully obtained in a case lately under my care, in which I had the benefit of the valuable aid of Mr. Bates, Surgeon to the Worcester Infirmary, in the following manner:—A soft flannel belt was applied, to which tapes were sewn front and back. To the front tapes (loops, two in number) were attached other tapes, which were then passed through the eyes of a silver catheter (well introduced into the bladder), one through each; they were then carried round to the loop of tape at the back of the belt. This was most effectual, easy of application, and very comfortable to the patient, who could move his legs and rest of his body about without displacing the instrument. It may not be altogether new (unless in respect to the tape at the back), but still of some use as a suggestion to others.

Your obedient servant,

Worcester, Nov. 10th, 1879. WM. WOODWARD, M.D.

"LUXURIA."

To the Editor of THE LANCET.

SIR,—We are much indebted to Professor Rogers for the interesting extracts from Gascoigne which appeared in your issue of the 22nd ult. They give indubitable proof that serious affections of the genitals were the result of intercourse long before the date of the discovery of the new world or of the siege of Naples. I believe that cases of such a nature were frequently considered as leprosy, between which and *luxuria* there was supposed to be a close connexion. Thus the writer of a sort of compendium of learning in the close of the fifteenth century says of leprosy: "Satyriasis item dicta, quod luxuriosis hominibus, sicut sunt Satyri, evenit"; and, again, that it is commoner among men than among women, "ob caliditatem et libidinem." In the account of the miracles wrought at the Shrine of St. Thomas of Canterbury (lately published under the order of the Master of the Rolls), there is the case of a priest who was immediately struck with leprosy, "quia fœminæ adhæserat." This may have been about the year 1180. Now, although there is difference of opinion regarding the communicability of leprosy by sexual relations, I fancy no one believes that the effects of its communicability are immediately apparent. It seems, therefore, to me that the case of the priest may be added to that of John of Gaunt and others mentioned in Mr. Rogers' extracts. Yours &c.,

Curzon-street, Dec. 1879. J. MACPHERSON, M.D.

SPECIFIC GRAVITIES OF "GERMS."

To the Editor of THE LANCET.

SIR,—In reading a very clever article upon the Spread of Diseases, by Dr. Maclagan, in the last number of the *Nineteenth Century*, I have been struck with the idea that some clue to the method of communicating diseases may be obtained from the consideration of the different specific gravities of the germs. Assuming that all diseases are propagated by germs, it is quite conceivable that the characteristics of those germs may be very different. It is generally admitted that diseases like scarlet fever are propagated through the atmosphere; while typhoid fever is more readily, if not entirely, introduced into the human system by means of fluids—water, milk, &c. May we not infer that this result is due to the different specific gravity of the germs, which in the first case float readily in the air, and in the latter require a denser fluid as a medium of communication? Yours faithfully,

Nov. 30th, 1879. CYRIL.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer, London; Dr. Stone, London; Professor Spence, Edinburgh; Dr. Habershon, London; Dr. Wilks, London; Professor Crombie, Aberdeen; Mr. Teevan, London; Dr. Gramshaw, Gravesend; Dr. Bruce, Kirkwall; Dr. Drummond, Newcastle-on-Tyne; Mr. Condon, London; Dr. Brown, Wansford; Mr. Bloxam; Dr. McNalty, Patterdale; Mr. Grant, Birmingham; Mr. Howley, St. John's, Newfoundland; Dr. Mundle, Eastbourne; Mr. Preston, Hastings; Dr. Woodward, Puckeridge; Mr. Winchester, Edinburgh; Messrs. Walters and Co., London; Dr. Rogers, London; Dr. Whitmarsh, Hounslow; Mr. Mackeson, London; Mr. W. J. Smith, London; Mr. Bott, Berry; Mr. Leigh, Liverpool; Dr. R. L. Johnston, London; Dr. Clark, Ongar; Mr. Keyworth, Birmingham; Dr. Duigan, London; Dr. Britton, Halifax; Mr. Burdett, Greenwich; Mr. Swain, Devonport; Mr. Wood, London; Mr. Flin, Walsall; Dr. Hardwicke, Rotherham; Dr. Maclagan, London; Mr. Carmichael, Edinburgh; Messrs. Domeier and Co., London; Dr. Daly, Dalston; Mr. Regan, Camberwell; Mr. Hemming, Bournemouth; Dr. Lilley, Bristol; Mr. Wharton, Kilburn; Mr. Holmes, Manchester; Dr. Murray; Messrs. Field and Tuer, London; Mr. E. Stanhope; Dr. Little, Benrydden; Messrs. O'Reilly and Co.; Mr. Pooley, Weston-super-Mare; Dr. Grosholz, Aberdovery; Dr. F. Wallace, Hackney; Dr. Browning, Rotherhithe; Mr. Williams, Sunderland; Mr. Lavers, Reddersburg, Orange Free State; Mr. Moon, Brighton; Mr. Scott, Manchester; Messrs. Street and Co., London; Mr. Cartwright, Lynn; Mr. Lewis, Cardiff; Mr. Flint, Westgate-on-Sea; Mr. Gaskoin, London; Mr. Wheeler, Bexley; Mr. Mossop, London; Mr. Nelson Hardy; Surgeon-Major Ogleby; Surgeon-Major Stafford, Makkerstroon; Mr. Garstang, Blackburn; Messrs. Nimmo and Co., Edinburgh; Mr. Carte; Mr. Batchelor, London; Parochial Medical Officer; A Constant Subscriber; R. J. H.; Censor; A Constant Reader; An Irish Assistant; A Sufferer; The Secretary of H.M. Office of Works; J. C., Reading; E. D. A.; An Occasional Correspondent at Durban; Ambitious; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Meadows, London; Dr. E. S. Wood, London; Mr. Symonds, London; Mr. Berry, Wisbeach; Mr. Moxon, Malvern; Mr. Mead, Pontypool; Dr. Archer, Liverpool; Mr. Mackey, Honiton; Dr. Weekes, Brompton; Mr. Healy; Newtown; Mr. Deering, Leicester; Mr. Williams, Bath; Mr. Wills, Glasgow; Mr. Rowbotham, Melbourne; Mr. Harries, Aberystwith; A. B., Ross; Licentiate, Liverpool; W. M.; Nemo, Walsall; Vendor; Samuda, Leicester; Delta, Wednesbury; W., Munslow; Medicus, Birmingham; S. J. C.; R. C.; R. B. T.; Medicus, Newcross; A. C.; Rutland; M. D.; Medicus, Wellington; Epsilon, Gartan; M. D., Hastings; Alpha, Islington.

Brighton Guardian, Scotsman, Annandale Herald, Engineer, Derbyshire Courier, Western Daily News, Social Notis, Estates Roll, Natal Mercury, Uitenage Times, Grimsby Herald, Lynn Advertiser, Mona's Herald, Shrewsbury Chronicle, Lincolnshire Herald, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Dec. 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Cockle (the President): "The Sequel to a Case of Aortic Disease." — Mr. Thomas Bryant, "On the Value of Parallelism of the Lower Extremities in the Treatment of Disease or Injury of the Hip-joint, with the best means of securing it." — Professor Forster: "Experiments on the Contamination of Atmospheric Air with the Vapour arising from Arsenical Pigments."

Tuesday, Dec. 16.

ST. MARK'S HOSPITAL.—Operations, 9 A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Extra-pericardial Aneurism, Hæmorrhage into Pericardium; Emphysematous Cyst of the Lung, with Atelectasis; Supposed Rupture of Roots of Brachial Plexus; Two Cases of peculiar Skin Disease; Congenital Malformation of the Heart; Large Gall-stone passed per Anum, with Remarks on the Structure and Formation of Biliary Calculi; Some Urinary and Intestinal Calculi; Specimen of Ainum; Glioma of Optic Nerve and Brain; Ovarian Cyst which had repeatedly Ruptured during nine years; &c. &c. Specimens by Card: Organs affected by Visceral Syphilis; Cystic Sarcoma of Testes, with Enchondroma; Specimens and Drawings of Cancer; United Kidneys; Dislocation of the Hip from Disease.—Specimens on the tables by 8 P.M. for inspection.

Wednesday, Dec. 17.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council Meeting.—8 P.M. Casual Communications.

Thursday, Dec. 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HARVEIAN SOCIETY.—8½ P.M. Harveian Lectures: Mr. Edmund Owen, "On Certain Practical Points in connexion with the Surgery of Childhood."

Friday, Dec. 19.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 20.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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